TXD-R11

SERVICE MANUAL

Canadian Model
AEP Model

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Name	CDM28-5BD13
	Base Unit Name	BU-5BD13
Tape Deck Section	Model Name Using Similar Mechanism	TC-WR741
	Tape Transport Mechanism Type	TCM-190RB52C

SPECIFICATIONS

Compact Disc Player Section

System

Type	Compact disc digital audio system
Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequency response	2 Hz – 20 kHz (± 0.5 dB)
Signal-to-noise ratio	More than 100 dB
Dynamic range	More than 95 dB
Harmonic distortion	Less than 0.007%
Channel separation	More than 95 dB

Cassette Deck Section

System

Recording system	4-track 2-channel stereo
Bias	AC bias
Head (x 1)	Erasing F & F Playback/Recording SD
Motor	Capstan motor × 1 (DC servo motor) Reel motor × 1 (DC motor)
Wow and flutter	±0.14% W. Peak (IEC) 0.08% W. RMS (NAB) ±0.19% W. Peak (DIN)

Fast-winding time (approx.)
90 sec. (with Sony C-60 cassette)

Frequency response (Dolby NR off)
Type I tape, Sony Type I (NORMAL):
30 – 15,000 Hz (± 3 dB)
Type II tape, Sony Type II (HIGH):
30 – 17,000 Hz (± 3 dB)
Type IV tape, Sony Type IV (METAL):
30 – 18,000 Hz (±3 dB)

Signal-to-noise ratio
(at peak level, weighted, and with Dolby NR off)
Type I tape, Sony Type I (NORMAL):
53 dB
Type II tape, Sony Type II (HIGH):
57 dB
Type IV tape, Sony Type IV (METAL):
57 dB

S/N ratio improvement

Dolby NR on	Approximate values
B	5 dB at 1 kHz, 10 dB at 5 kHz
C	15 dB at 500 Hz, 20 dB at 1 kHz

— Continue to next page —

COMPACT DISC CASSETTE

SONY®

Harmonic distortion Type I tape, Sony Type I (NORMAL): 0.4% (160 nWb/m 315 Hz, 3rd H.D.)
Type IV tape, Sony Type IV (METAL): 1.8% (250 nWb/m 315 Hz, 3rd H.D.)

Inputs

	Jack type	Maximum input sensitivity
TAPE IN	Phono jacks	0.16 V (input impedance: 47 kilohms)

Outputs

	Jack type	Maximum output level	Load impedance
TAPE OUT (FIXED)	Phono jacks	0.5 V (at a load impedance of 47 kilohms)	Over 10 kilohms
CD OUT (FIXED)	Phono jacks	2 V (at a load impedance of 50 kilohms)	Over 10 kilohms
PHONES (VARIABLE)	Stereo phone jack	0 – 3 mW (at a load impedance of 32 ohms)	

General

Power requirements

Where purchased	Power requirements
Europe	220 V – 230 V AC, 50/60 Hz
Canada	120 V AC, 60 Hz

Power consumption 23 W

Dimensions 430 × 125 × 280 mm (w/h/d) ($17 \times 4\,^7/_8 \times 11\,^1/_8$ inches)

Mass (approx.) 4.5 kg (9 lb. 15 oz.)

Supplied accessories Audio connecting cord (2 phono plugs – 2 phono plugs) (3)

Design and specifications are subject to change without notice.

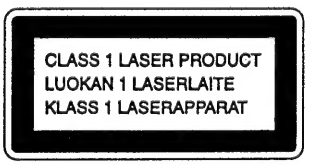
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

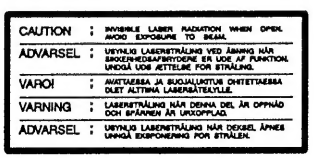
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

TABLE OF CONTENTS



This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

The following caution label is located inside of the unit.



CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

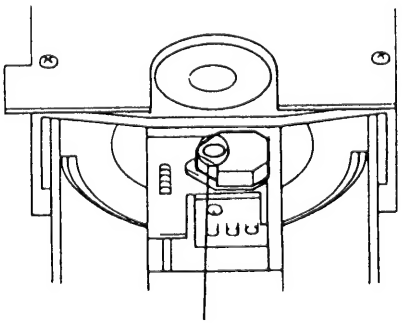
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

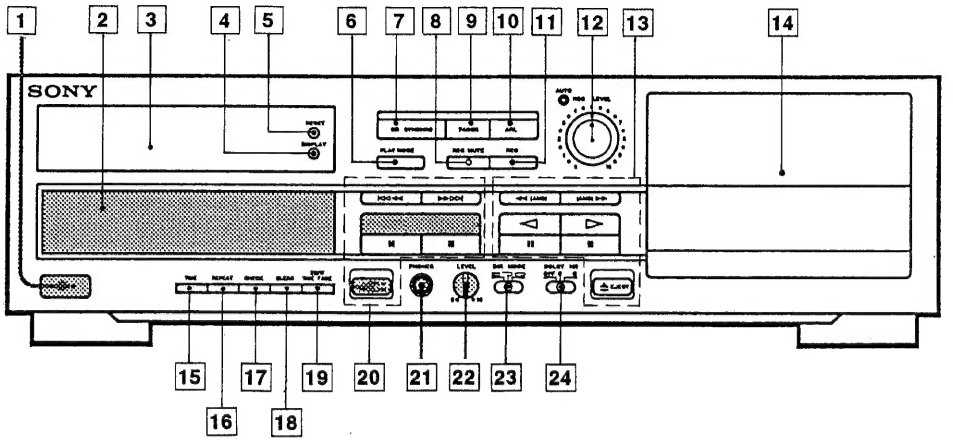
1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.



❶ Confirm that laser beam is spread.
❷ Up and downmotion of the objective lens. (3 times)

SECTION 1
GENERAL

- **Location of Controls**



1 POWER button
2 Disc tray
3 Display window
4 DISPLAY butto
5 RESET button
6 PLAY MODE button
7 CD SYNCHRO button
8 REC MUTE button
9 FADER button
10 ARL button
11 REC button
12 REC LEVEL control
13 Tape operation buttons
◀◀ ▶▶ : Fast winding
▷: Forward play
◁: Reverse play
II: PAUSE
■: STOP
⏏: EJECT

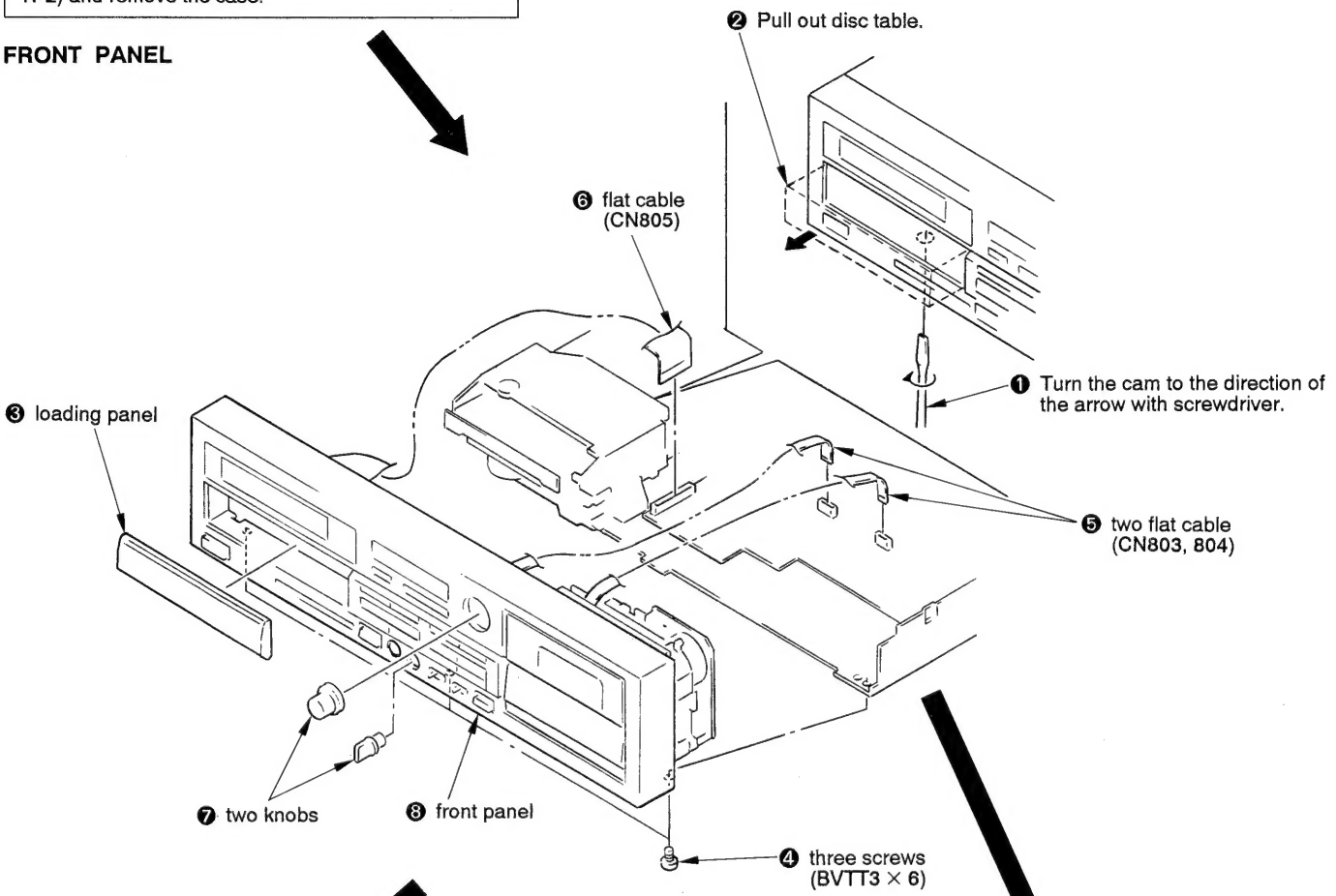
14 Cassette holder
15 TIME button
16 REPEAT button
17 CHECK button
18 CLEAR button
19 EDIT/TIME FADE button
20 CD operation button
⏏: OPEN/CLOSE
II: PAUSE
■: STOP
▷: PLAY
⏮ ◀◀ ▶▶ ⏭: Manual search
21 PHONES jack
22 PHONES LEVEL control
23 DIR MODE switch
24 DOLBY NR switch

SECTION 2
DISASSEMBLY

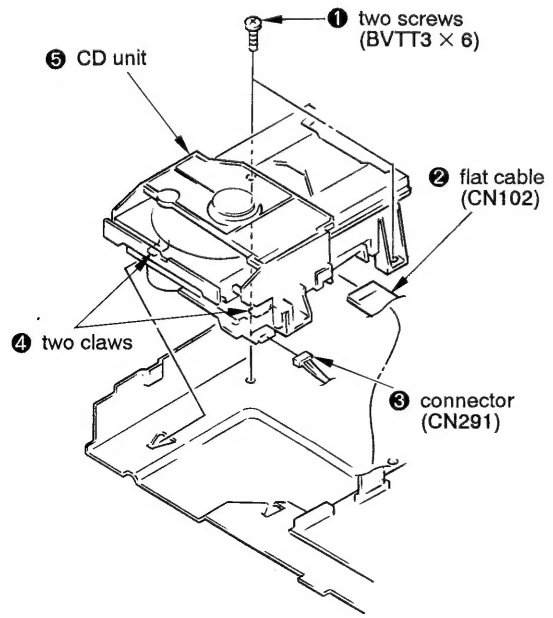
Note: Follow the disassembly procedure in the numerical order given.

CASE
Unscrew the four case attachment screw (CASE 3 TP2) and remove the case.

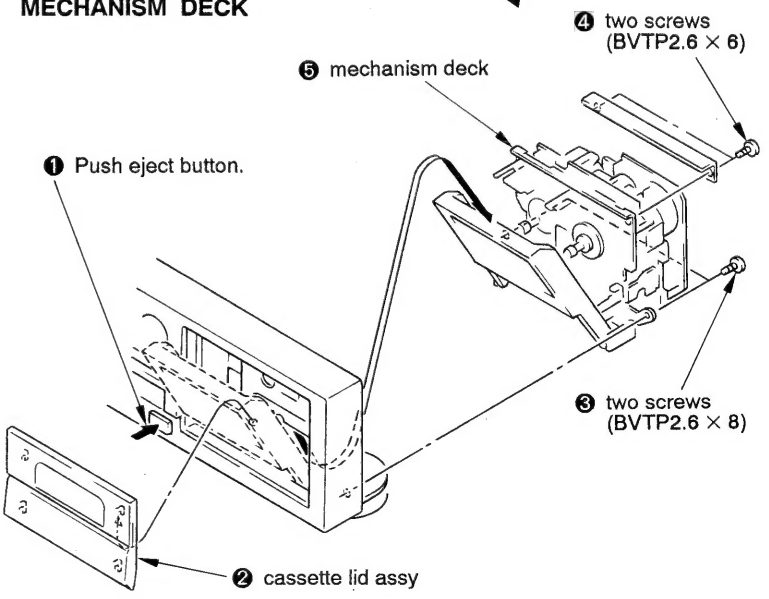
FRONT PANEL



CD UNIT



MECHANISM DECK



SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback/erase head　　pinch roller
   rubber belts　　capstan
   idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 65 g • cm (0.42 to 0.9 oz • inch)
Forward back tension	CQ-102C	1 to 6 g • cm (0.014 to 0.083 oz • inch)
Reverse	CQ-102RC	30 to 65 g • cm (0.42 to 0.9 oz • inch)
Reverse back tension	CQ-102RC	1 to 6 g • cm (0.014 to 0.083 oz • inch)
FF/REW	CQ-201B	70 to 120 g • cm (0.98 to 1.66 oz • inch)

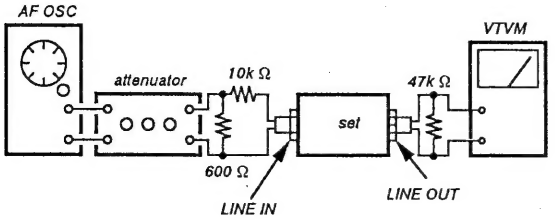
3-2. ELECTRICAL ADJUSTMENTS

TAPE SECTION

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to male playback adjustment at first.)
2. The adjustments and measurement should be performed for both L-CH and R-CH.
   - Switch position
     DOLBY NR switch　　: OFF
     DIR MODE switch　　: ⇄
   - Standard record position :
     Deliver the standard input signal level to input jack and set the REC LEVEL control to obtain the standard output signal level as follows.

– Record Mode –



Standard Input Level

Input terminal	LINE IN
source impedance	10k Ω
input signal level	0.5V (– 3.8dB)

Standard Output Level

Output terminal	LINE OUT
load impedance	47k Ω
output signal level	0.5V (– 3.8dB)

Test Tape

Tape	Contents	Use
P-4-A100	10kHz, – 10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

0dB=0.775V

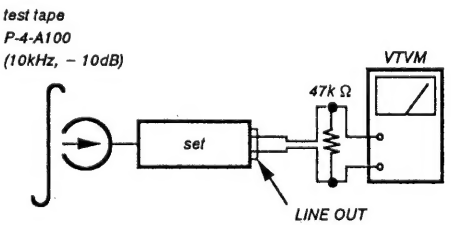
Test Mode

1. Insert a short-circuit plug into TP801 (2P) and turn ON the power switch. (Earth pin ⑲ of IC801 and turn ON the power switch.)
   At first, all the fluorescent tubes light up, then the system returns to normal display. (However, "0000" is not displayed on the counter.)
2. To release the test mode, remove the short plug and turn off the power switch.
3. Remove the short plug after completion of adjustment.

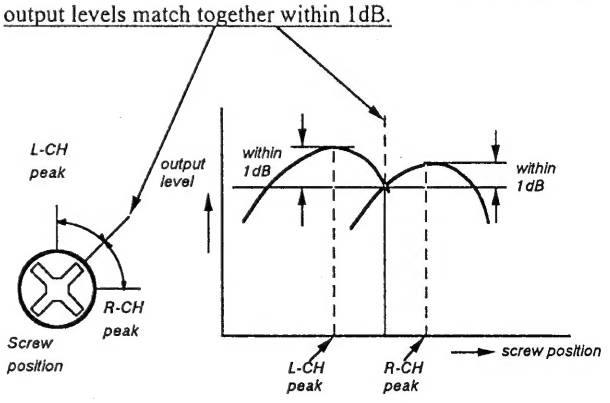
Record/Playback Head Azimuth Adjustment

Procedure :

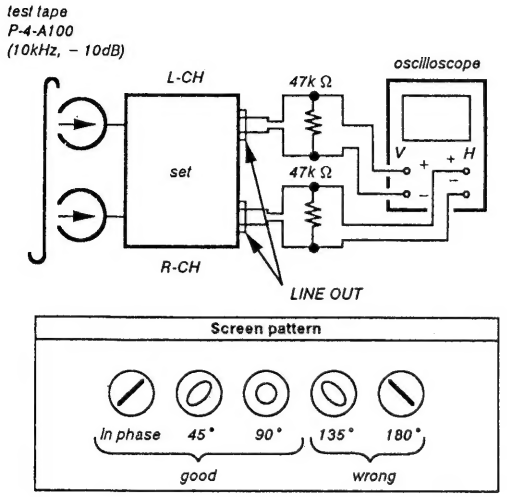
1. Forward playback Mode



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.

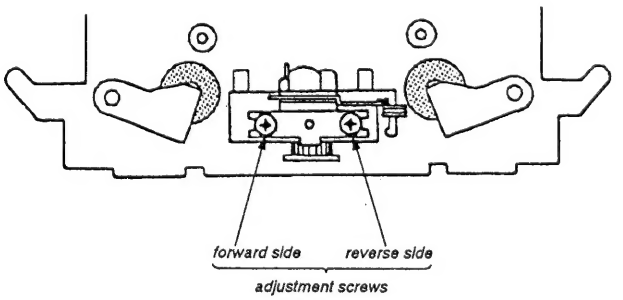


3. Playback Mode



4. Change the reveres playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screws with suitable locking compound.

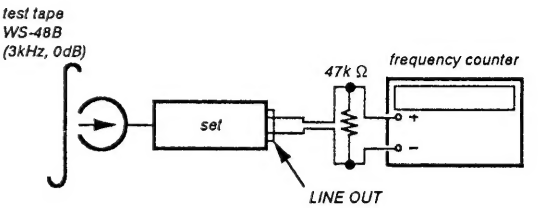
Adjustment Location : – record/playback head –



Tape Speed Adjustment

Procedure :

– Forward Playback Mode –



1. Set to FWD playback mode.
2. Adjust RV71 so that the frequency counter reeding becomes 3,000 ± 10Hz.

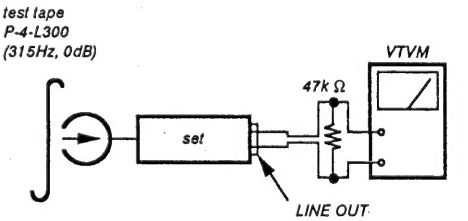
Frequency difference between the beginning and the end of the tape should be within 3%.

Adjustment Location : AUDIO board

Playback Level Adjustment

Procedure :

– Forward Playback Mode –



Adjust RV11(L-CH) and RV21(R-CH) so the VTVM reading becomes the adjustment limits below.

Adjustment Value :

LINE OUT level : – 7.7 ± 0.5dB (0.301 to 0.338V)

Level difference between channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : AUDIO board

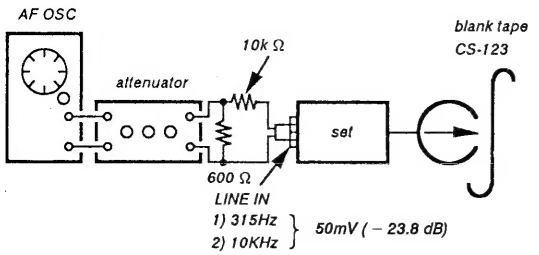
Record Bias Adjustment

Setting :

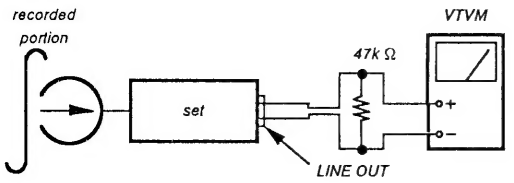
REC LEVEL control : standard record position (Refer to page 6.)

Procedure :

1. Record Mode



2. Playback Mode



Confirm that the 10kHz playback output is 0 ± 0.5dB relative to the 315Hz output. If necessary, adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

Adjustment Location : AUDIO board

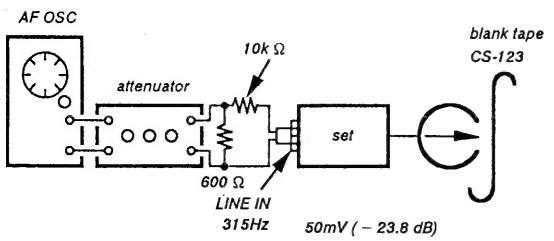
Record Level Adjustment

Setting :

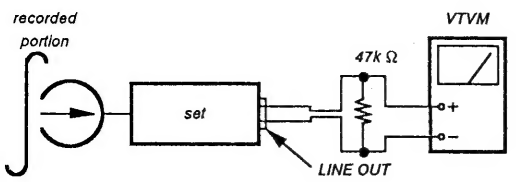
REC LEVEL control : standard record position (Refer to page 6.)

Procedure :

1. Record Mode



2. Playback Mode



Confirm playback the tape recorded become adjustment level as follows.

If necessary, adjust RV111 (L-CH), RV211 (R-CH) and repeat the steps 1 and 2.

Adjustment Value :

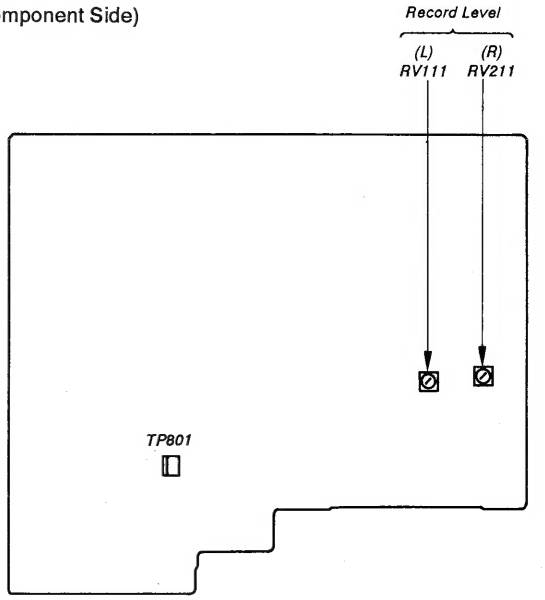
LINE OUT level : – 23.8 ± 0.5 dB (47.2 to 53.0 mV)

Adjustment Location : MAIN board

– Adjustment Parts Location Diagrams –

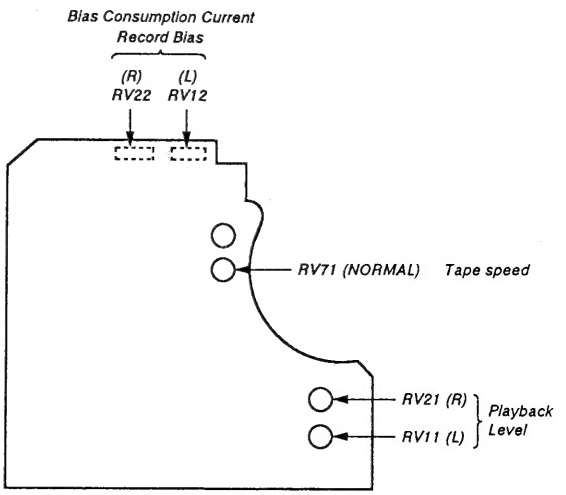
【MAIN BOARD】

(Component Side)



【AUDIO BOARD】

(Conductor Side)

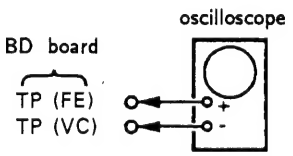


CD SECTION

Note :

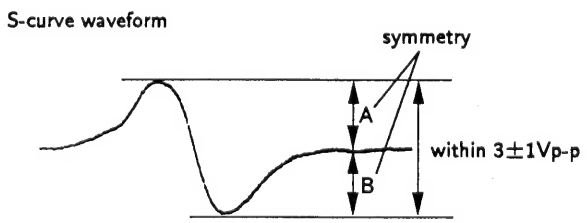
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure :

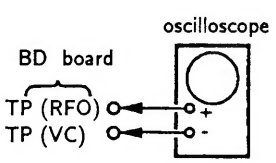
1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.



6. After check, remove the lead wire connected in step 2.

Note : • Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

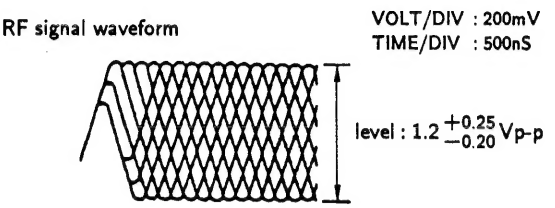


Procedure :

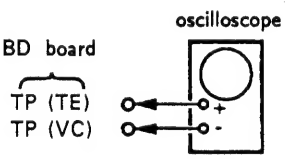
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

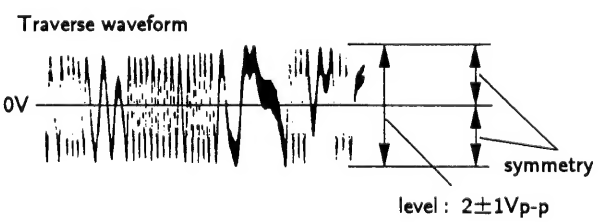


E-F Balance Check



Procedure :

1. Connect JW146 (ADJ) to JW145 (GND) and TP (TEI) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

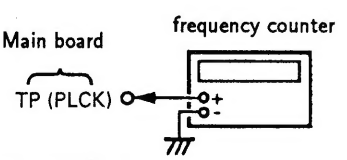


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

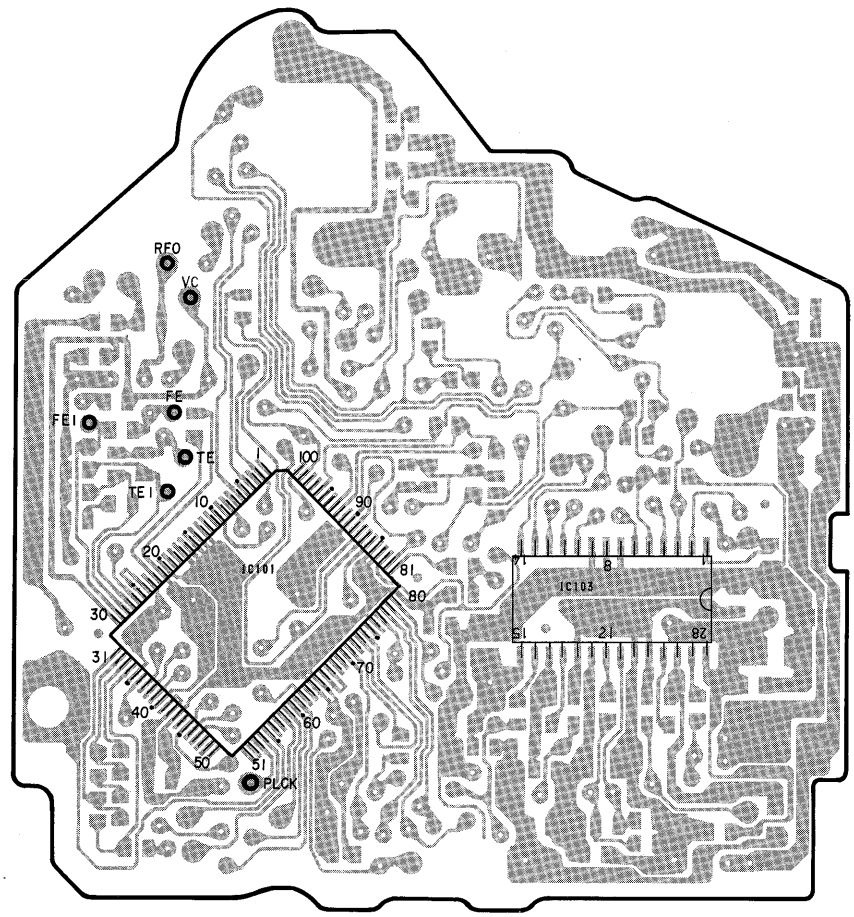
1. Connect frequency counter to test point (PLCK) with lead wire.



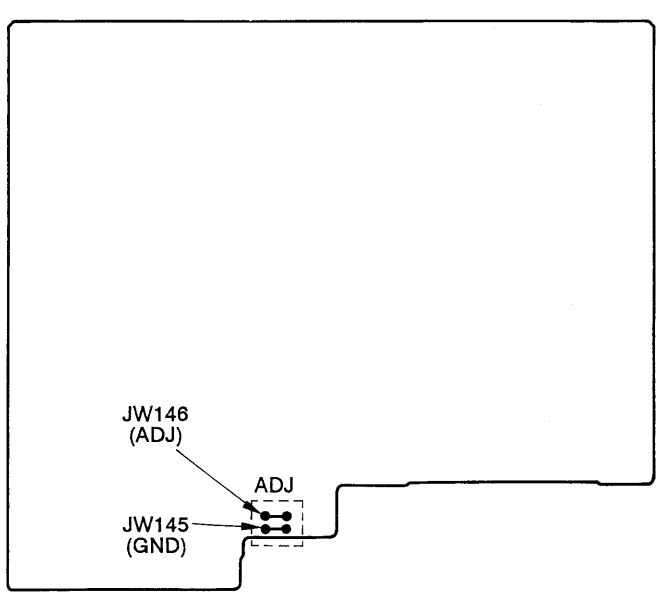
2. Turned Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Adjustment Location:

【BD BOARD】
(Conductor Side)

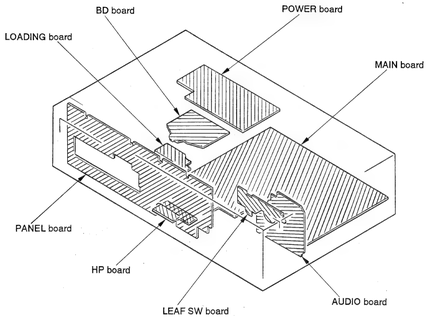


【MAIN BOARD】
(Component Side)



SECTION 4
DIAGRAMS

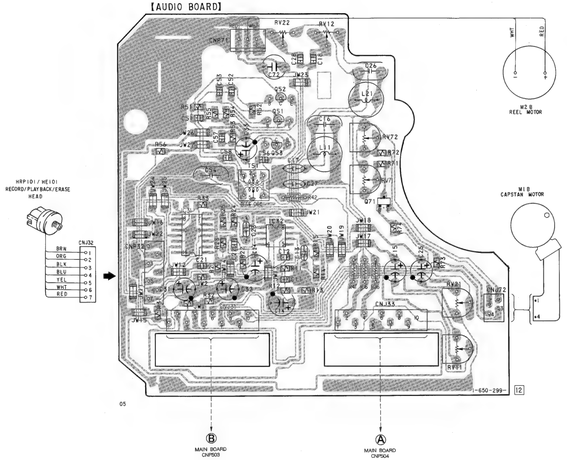
• Circuit Boards Location



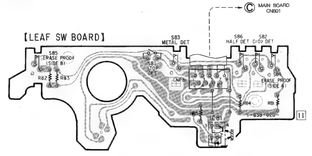
• Semiconductor Location

Ref. No.	Location
D901	B-10
IC31	F-3
IC32	F-4
IC81	K-6
IC101	J-10
IC102	I-16
IC103	J-12
IC201	B-15
Q51	D-4
Q52	D-4
Q53	E-4
Q71	E-6

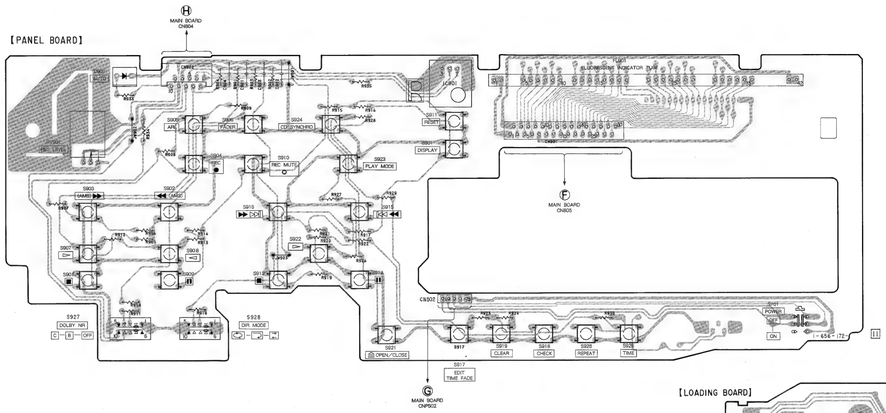
【AUDIO BOARD】



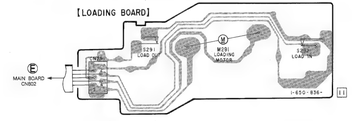
【LEAF SW BOARD】



【PANEL BOARD】

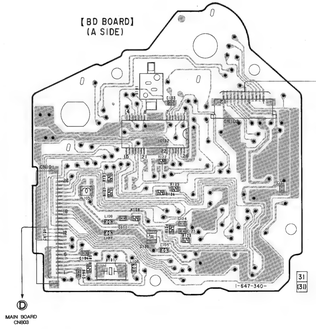


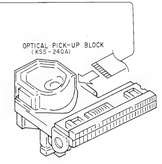
【LOADING BOARD】



【BD BOARD】 (B SIDE)

【BD BOARD】 (A SIDE)

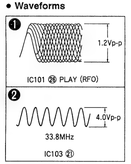




Note:
- ○——— : parts extracted from the component side.
- ● : Through hole.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

• Waveforms

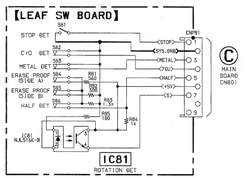


Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ⚠ : nonflammable resistor.

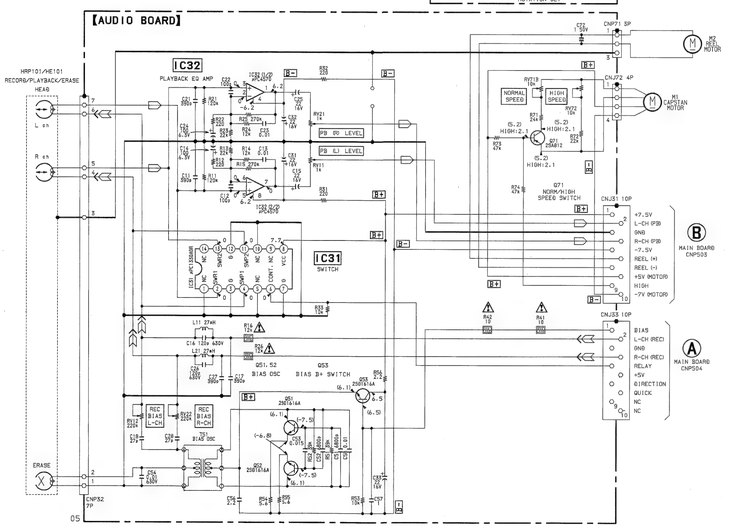
Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B + Line.
- B− : B − Line.
- : panel designation.
- : adjustment for repair.
- Voltages are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ▷ : PB
  ▷▷ : REC
  ⇨ : CD

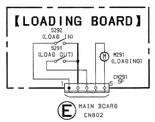
【LEAF SW BOARD】

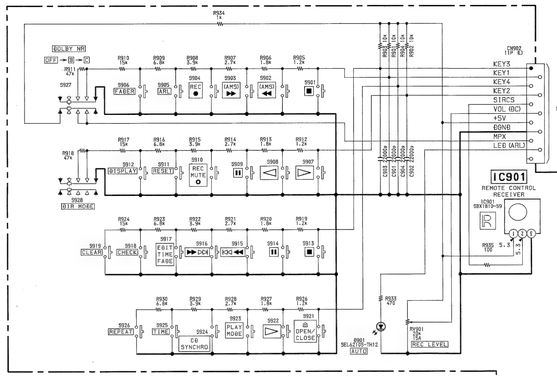


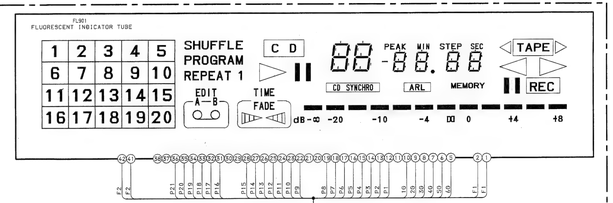
【AUDIO BOARD】

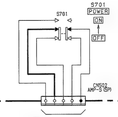


【LOADING BOARD】

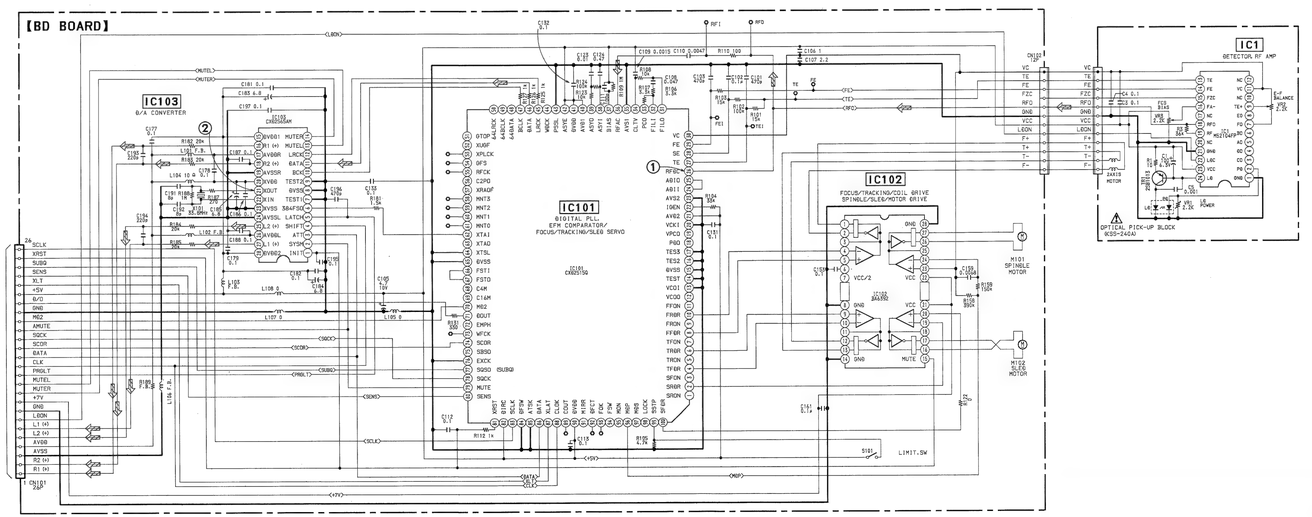






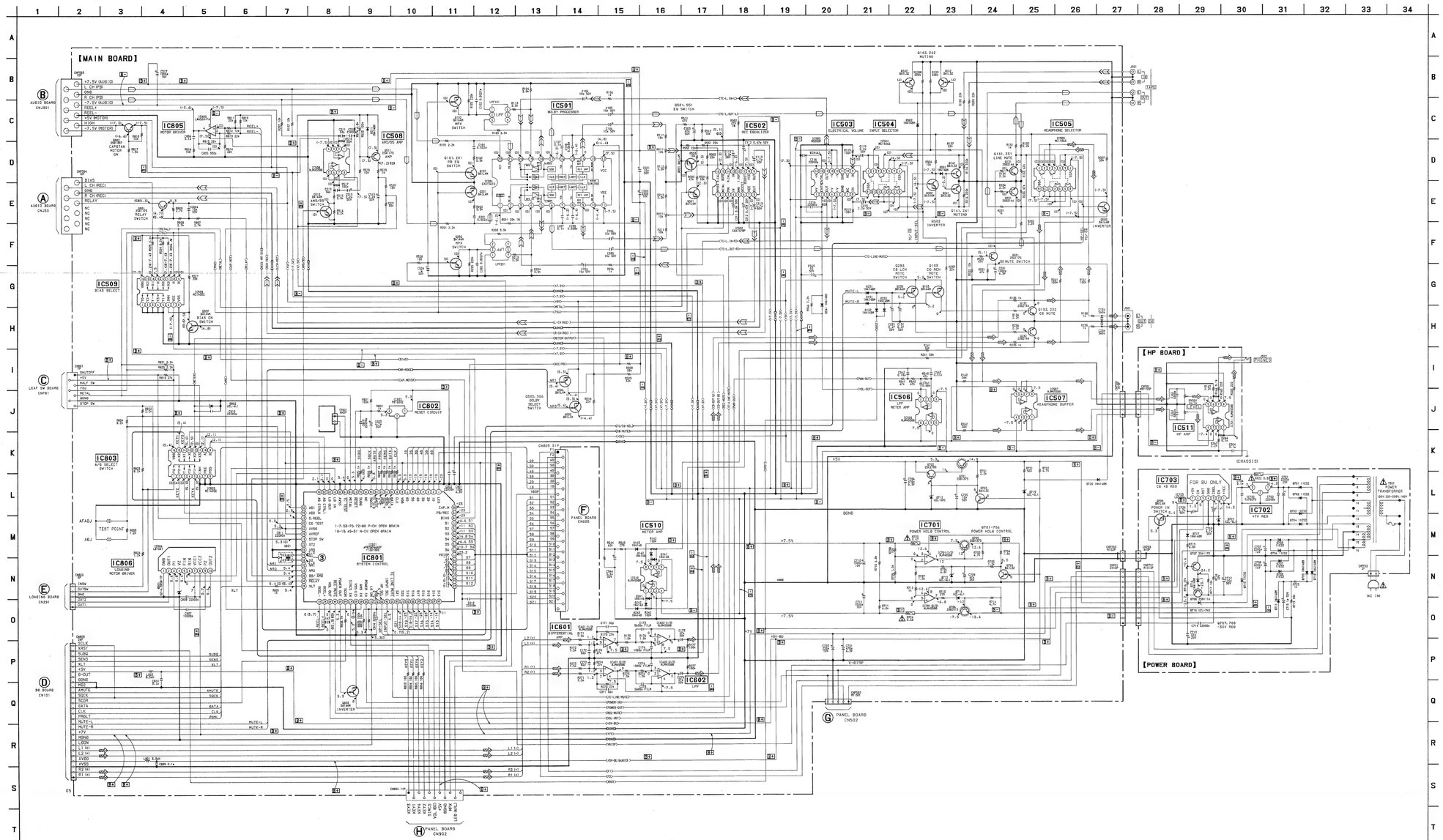


【BD BOARD】



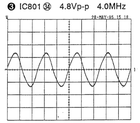
4-3. SCHEMATIC DIAGRAM – MAIN Section –

• See page 31 for IC Block Diagrams.



• Waveform

③ IC801 ㉞ 4.8Vp-p 4.0MHz



Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- ⚠ : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

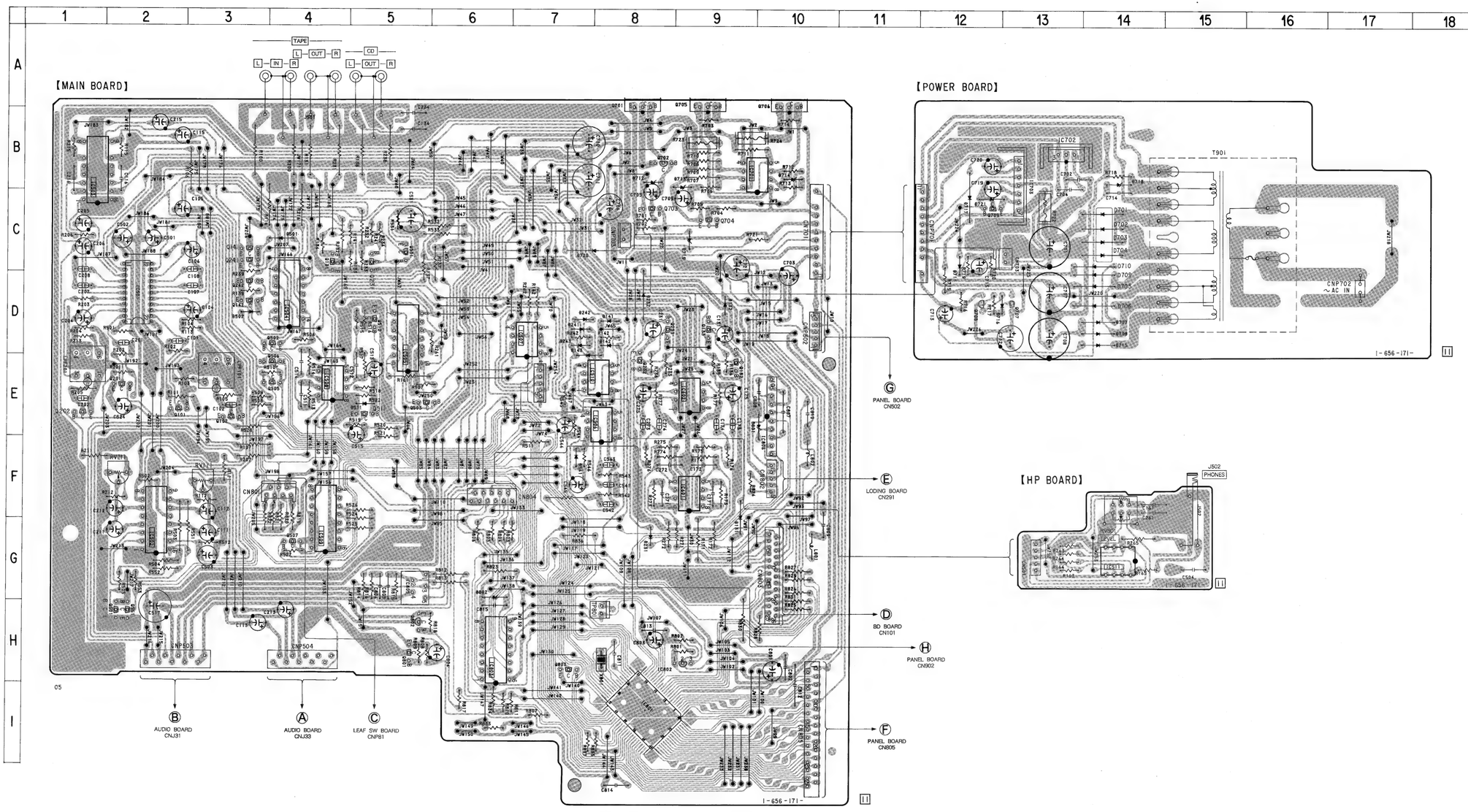
- B+ : B + Line.
- B− : B − Line.
- : panel designation.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (10 MΩ/V). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : PB
  - : REC
  - : CD

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D131	G-9	IC511	G-14
D132	D-9	IC601	F-9
D141	D-8	IC602	E-9
D142	D-8	IC701	B-9
D143	D-7	IC702	B-13
D231	G-8	IC703	B-13
D232	D-8	IC801	I-8
D241	D-7	IC802	H-9
D242	D-7	IC803	H-6
D243	D-7	IC805	G-5
D501	C-4	IC806	E-10
D502	D-3		
D511	E-5	Q101	E-3
D541	F-7	Q102	E-3
D701	C-14	Q131	C-4
D702	C-14	Q132	E-9
D703	C-14	Q133	D-9
D704	C-14	Q141	C-3
D705	D-14	Q142	D-3
D706	D-14	Q201	E-3
D707	D-14	Q202	E-1
D708	D-14	Q231	C-5
D709	C-14	Q233	E-8
D710	C-14	Q241	C-3
D711	C-12	Q242	D-3
D712	B-8	Q501	H-2
D713	B-9	Q502	D-4
D714	B-10	Q503	E-5
D715	D-14	Q505	E-4
D716	D-13	Q506	E-4
D717	C-12	Q507	G-4
D718	B-14	Q511	E-5
D719	C-9	Q512	D-5
D720	C-7	Q531	C-5
D721	C-12	Q551	H-2
D801	E-10	Q701	A-8
D802	G-6	Q702	B-8
		Q703	C-8
IC501	D-2	Q704	C-9
IC502	G-2	Q705	A-9
IC503	B-1	Q706	A-10
IC504	D-4	Q707	D-13
IC505	D-5	Q708	D-12
IC506	E-8	Q709	C-12
IC507	D-7	Q801	H-5
IC508	E-4	Q802	H-5
IC509	G-4	Q803	H-7
IC510	E-8		

Note:

• ○——— : parts extracted from the component side.



4-5. IC PIN FUNCTION DESCRIPTION

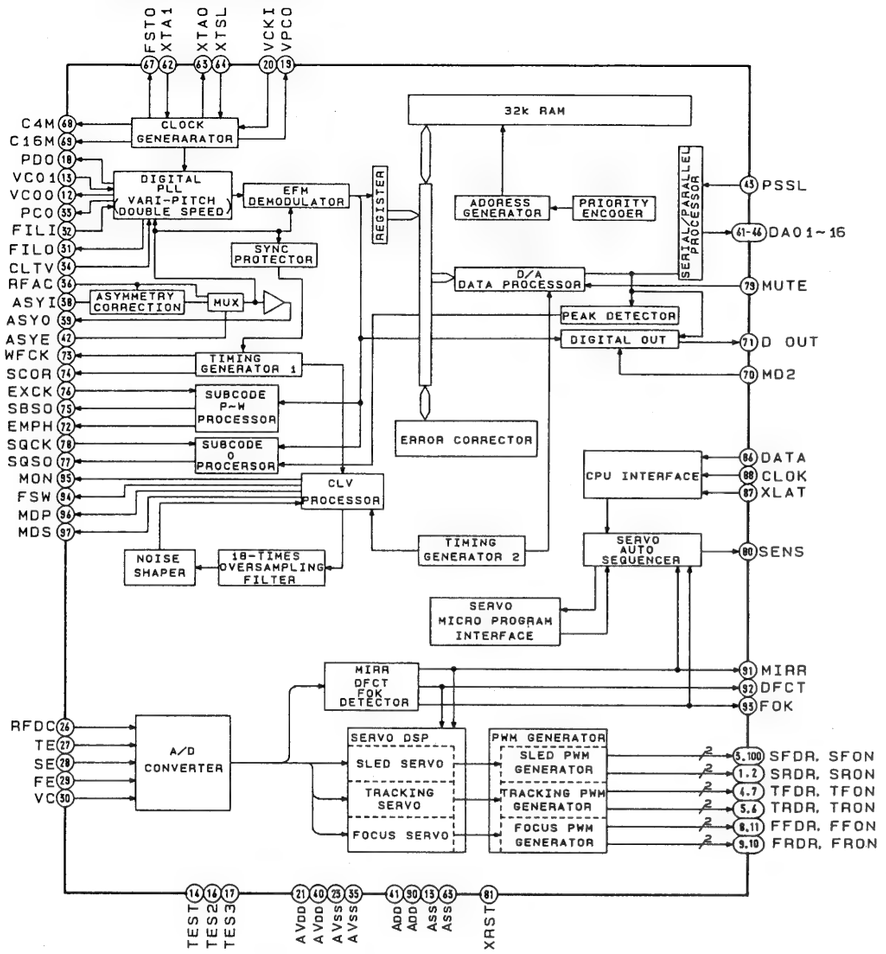
IC801 μPD78044AGF-133-3B9

Pin No.	Pin Name	I/O	Function
1	LED	O	Auto Rec Level indicate LED ON output ("H": ON)
2	1G	O	FL tube grid output (6G)
3	2G	O	FL tube grid output (5G)
4	3G	O	FL tube grid output (4G)
5	4G	O	FL tube grid output (3G)
6	5G	O	FL tube grid output (2G)
7	6G	O	FL tube grid output (1G)
8	VDD	—	Power supply pin (+5 V)
9	CLK	O	Serial clock output to CDM (IC101, 103)
10	DATA	O	Serial data output to CDM (IC101, 103)
11	SENS	I	SENS signal input from CDM (IC101)
12	PGML	O	Latch clock (PRGLT) output to CDM (IC103)
13	AMUTE	O	CD mute ON output to CDM (IC101, 103). ("L": MUTE)
14	SQCLK	O	SUB-Q code serial clock output to CDM (IC101)
15	NC	—	Not used
16	SUBQ	I	SUB-Q code serial data input from CDM (IC101)
17	RESET	I	Reset input ("L": RESET)
18	METAL	I	TYPE IV cassette detect switch input
19	TC TEST	I	DECK TEST pin ("L": DECK TEST MODE)
20	AVSS	—	GND
21	LD IN	O	Loading motor rotation direction control output (OUT direction)
22	LD OUT	O	Loading motor rotation direction control output (IN direction)
23	AD CTRL1	O	A/D select output to Selector (IC803)
24	AD CTRL0	O	
25	AD1	I	A/D input from Selector (IC803)
26	AD0	I	
27	S. REEL	I	S-REEL pulse input (A/D)
28	CD TEST	I	CD TEST pin (A/D). → See other description
29	AVDD	—	Power supply pin (+5 V)
30	AVREF	—	Reference voltage pin (+5 V)
31	STOP SW	I	DECK stop switch input ("H": STOP)
32	XT2	—	Not used
33	VSS	—	GND
34	X1	I	System clock input pin
35	X2	—	System clock
36	NR1	O	DOLBY NR mode control output. → See other description
37	NR0	O	
38	BS/AMS	O	DECK AMS/BS amp select output ("L": AMS, "H": BS)
39	RELAY	O	DECK REC/PB head relay select output ("L": REC, "H": PB)
40	XLT	O	Latch output to CDM (IC101)

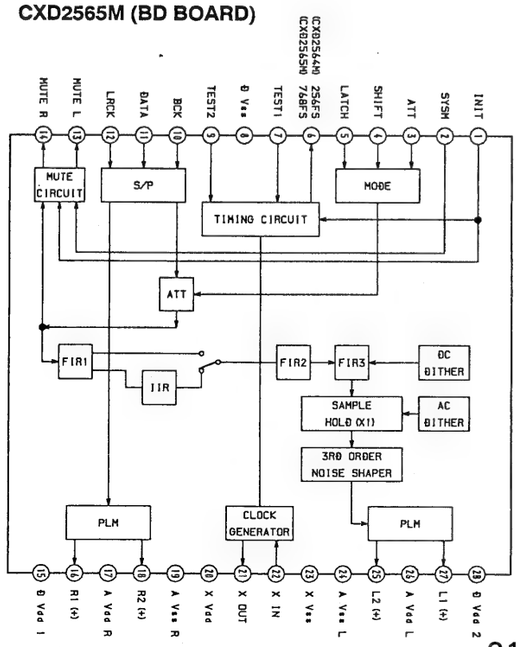
Pin No.	Pin Name	I/O	Function
41	REEL −	O	DECK reel motor rotation direction control output (to amp "−")
42	RELL +	O	DECK reel motor rotation direction control output (to amp "+")
43	VOL OUT	O	Input level control output (PWM) to LPF (IC506)
44	REC MUTE	O	REC MUTE ON output ("L": MUTE)
45	POWER OUT	O	Power hold control output ("H": HOLD)
46	SCOR	I	SCOR input from CDM (IC101)
47	SIRCS IN	I	SIRCS input
48	VSS (IC)	—	GND
49	AMS IN	I	AMS signal input ("L": BLANK, "H": MUSIC)
50	POWER IN	I	Power switch input ("L": OFF)
51	LD ON	O	Laser Diode ON output to CDM (IC1). ("H": ON)
52	VDD	—	Power supply pin (+5 V)
53	HP SEL	O	Headphone output select ("L": CD, "H": TAPE)
54	INPUT SEL	O	DECK Input select ("L": CD, "H": LINE IN)
55	TC LINE MUTE	O	DECK Line mute ON output ("L": MUTE)
56	S21	O	FL tube segment output (S21)
57	S20	O	FL tube segment output (S20)
58	S19	O	FL tube segment output (S19)
59	S18	O	FL tube segment output (S18)
60	S17	O	FL tube segment output (S17)
61	S16	O	FL tube segment output (S16)
62	S15	O	FL tube segment output (S15)
63	S14	O	FL tube segment output (S14)
64	S13	O	FL tube segment output (S13)
65	S12	O	FL tube segment output (S12)
66	S11	O	FL tube segment output (S11)
67	S10	O	FL tube segment output (S10)
68	S9	O	FL tube segment output (S9)
69	S8	O	FL tube segment output (S8)
70	S7	O	FL tube segment output (S7)
71	VDISP	—	Power supply pin (−30 V)
72	S6	O	FL tube segment output (S6)
73	S5	O	FL tube segment output (S5)
74	S4	O	FL tube segment output (S4)
75	S3	O	FL tube segment output (S3)
76	S2	O	FL tube segment output (S2)
77	S1	O	FL tube segment output (S1)
78	BIAS	O	BIAS ON output ("H": ON)
79	PB/REC	O	DOLBY NR REC/PB select output ("L": PB, "H": REC)
80	CAP. M	O	Capstan motor ON output ("H": ON)

• IC Block Diagrams

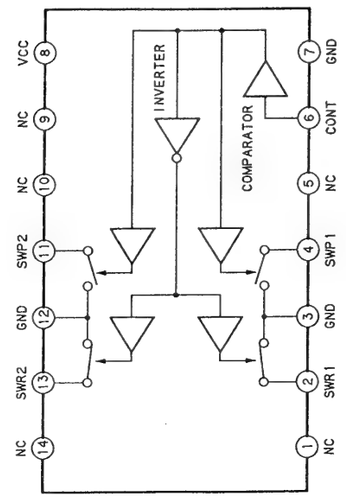
IC101 CXD2515Q (BD BORAD)



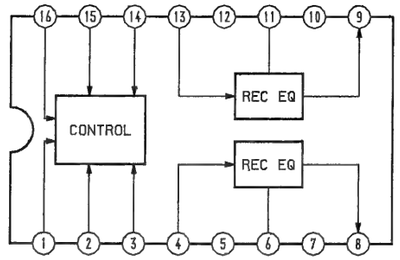
IC103 CXD2565M (BD BOARD)



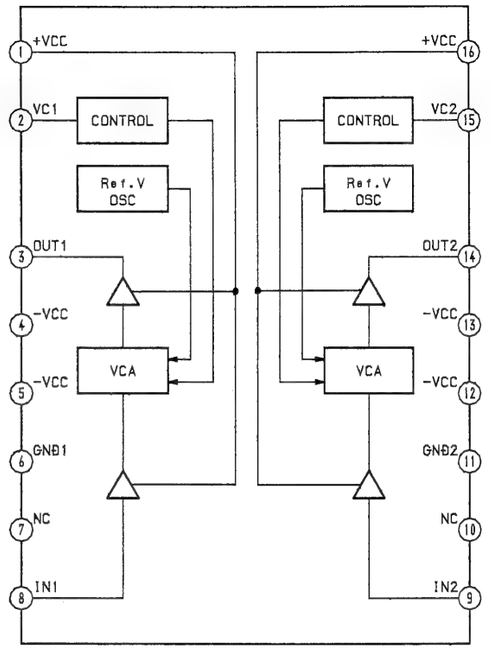
IC31 μPC1330GR (AUDIO BOARD)



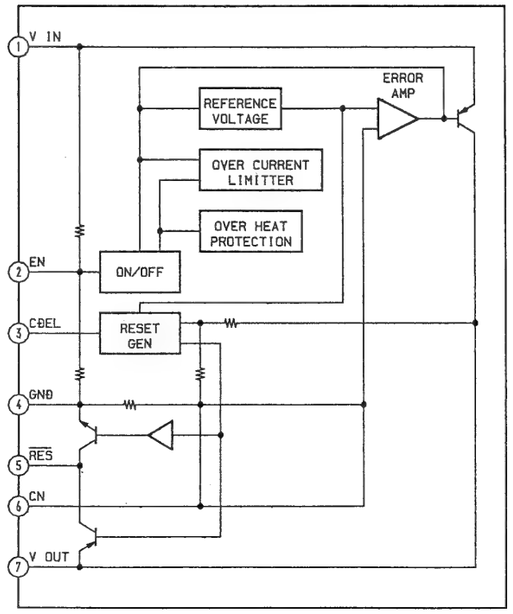
IC502 CXA1578P (MAIN BOARD)



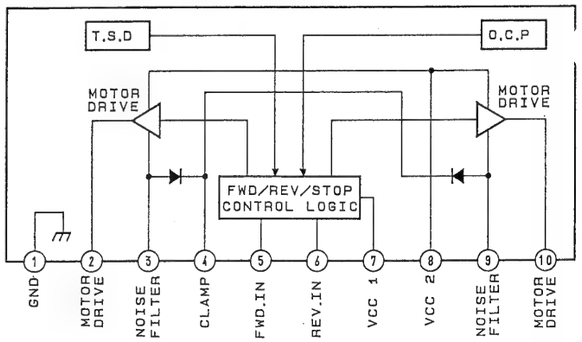
IC503 M5283P (MAIN BOARD)



IC703 LA5602 (MAIN BOARD)



IC806 LB1641 (MAIN BOARD)



SECTION 5
EXPLODED VIEWS

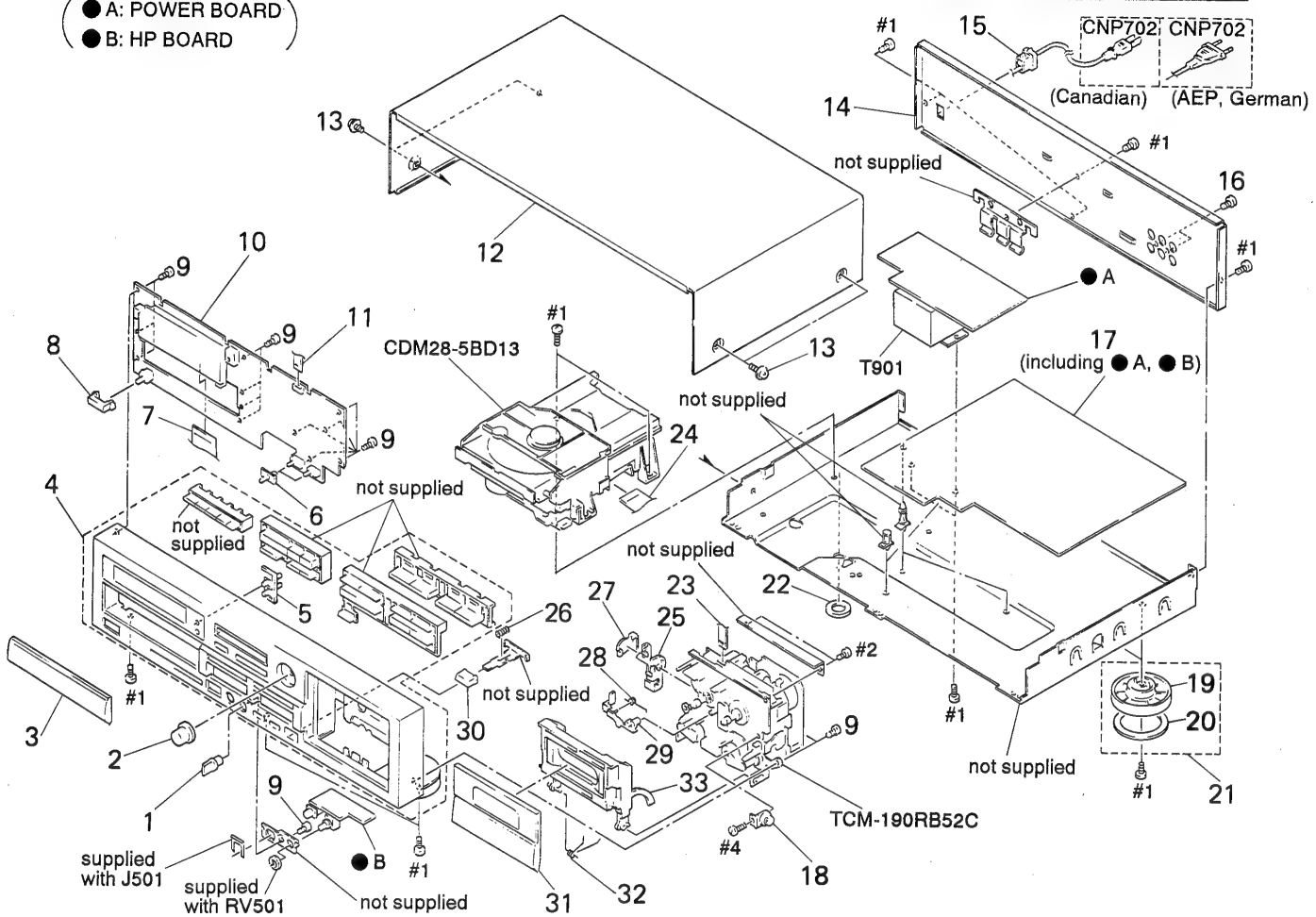
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

(1) CABINET SECTION

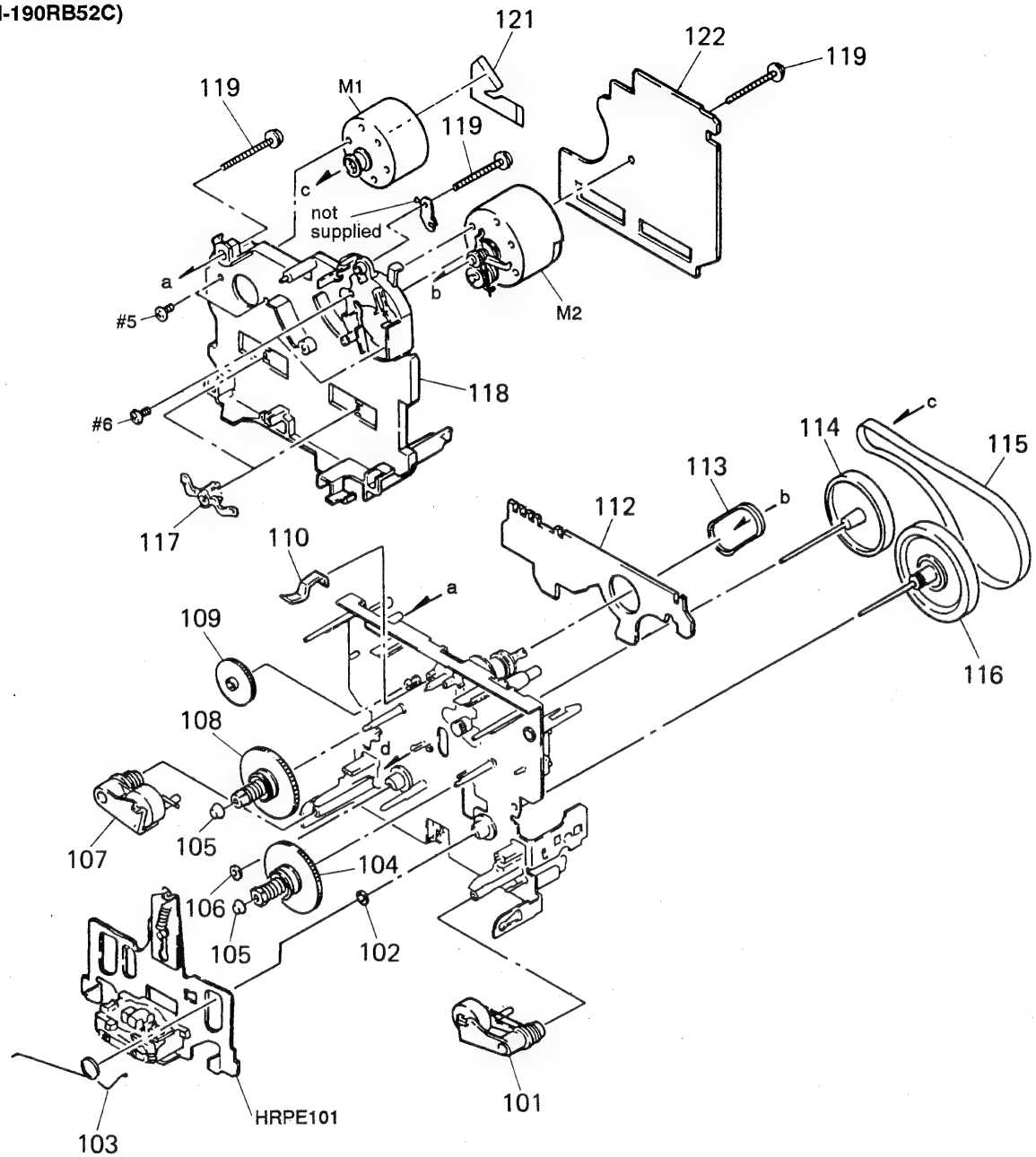
(● A: POWER BOARD
● B: HP BOARD)



Ref. No.	Part No.	Description	Remark
1	3-354-931-01	KNOB (DIA. 10)	
2	3-909-661-01	KNOB (REC)	
3	3-923-299-01	PANEL, LOADING	
4	X-3370-091-1	PANEL ASSY, FRONT (AEP, German)	
4	X-3370-151-1	PANEL ASSY, FRONT (Canadian)	
5	3-922-832-01	BUTTON (COUNTER)	
6	3-917-216-11	KNOB (TIMER)	
7	1-775-368-11	WIRE (FLAT TYPE) (31 CORE)	
8	3-354-932-01	BUTTON (POWER)	
9	4-951-620-01	SCREW (2.6X8), +BVTP	
* 10	A-2007-414-A	PANEL BOARD, COMPLETE	
11	1-775-369-11	WIRE (FLAT TYPE) (11 CORE)	
* 12	4-943-088-41	CASE	
13	3-363-099-01	SCREW (CASE 3 TP2)	
* 14	3-923-319-01	PANEL, BACK (Canadian)	
* 14	3-923-319-11	PANEL, BACK (AEP, German)	
* 15	3-703-244-00	BUSHING (2104), CORD (AEP, German)	
15	3-703-571-11	BUSHING (S) (4516), CORD (Canadian)	
16	3-704-515-01	SCREW (BV/RING)	
* 17	A-2007-413-A	MAIN BOARD, COMPLETE (Canadian)	
* 17	A-2007-415-A	MAIN BOARD, COMPLETE (AEP, German)	
18	3-354-963-01	DAMPER	

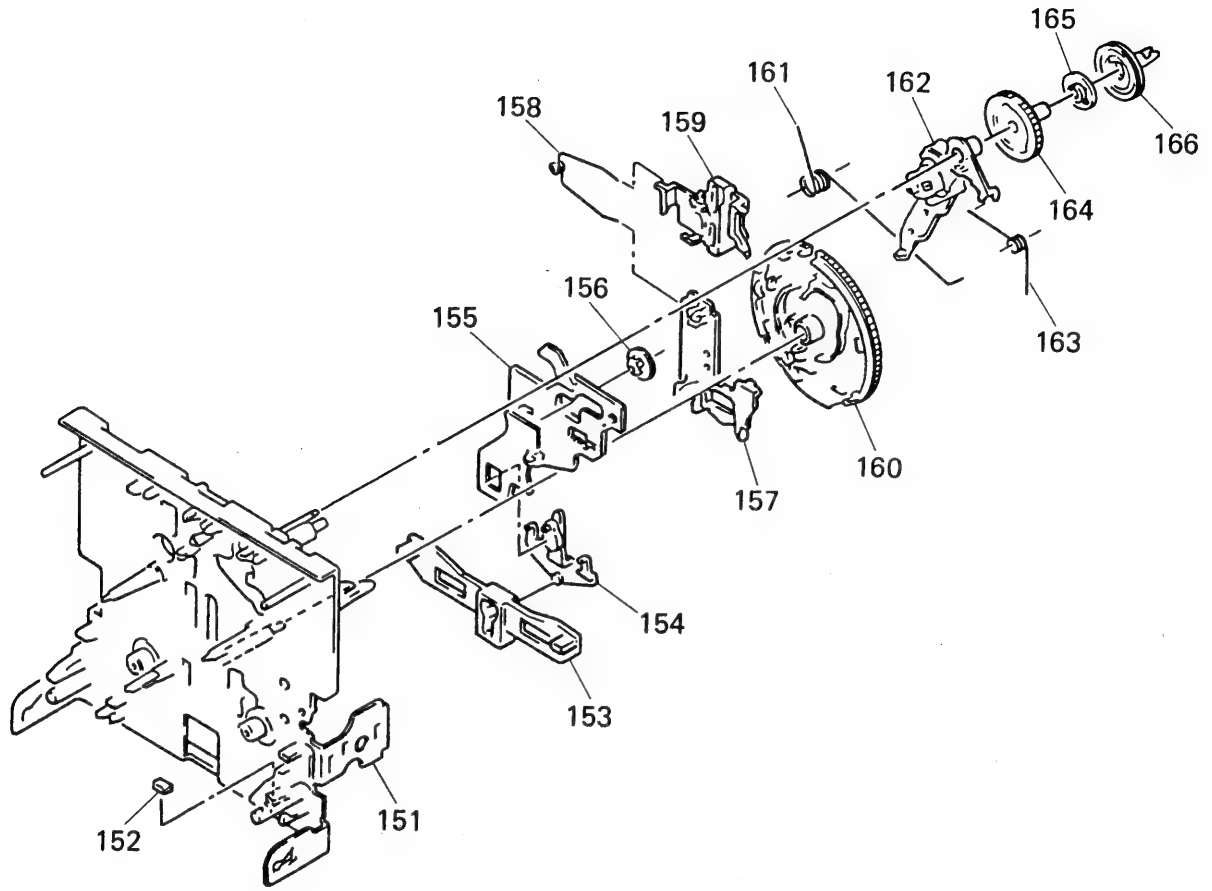
Ref. No.	Part No.	Description	Remark
19	3-318-688-31	FOOT (F58175S) (AEP, German)	
19	3-318-688-51	FOOT (F58175S) (Canadian)	
20	4-923-836-21	CUSHION	
21	X-4941-291-1	FOOT ASSY (F58175S) (Canadian)	
21	X-4941-292-1	FOOT ASSY (F58175S) (AEP, German)	
22	3-302-647-01	WASHER, RUBBER	
23	1-775-370-11	WIRE (FLAT TYPE) (7 CORE)	
24	1-775-371-11	WIRE (FLAT TYPE) (26 CORE)	
* 25	3-354-953-01	LEVER (LOCK LEVER L)	
26	3-382-382-11	SPRING, COMPRESSION	
27	3-354-957-01	JOINT (LOCK LEVER)	
28	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
29	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
30	3-923-306-01	BUTTON (EJECT)	
31	X-3370-158-1	LID ASSY, CASSETTE	
32	4-959-231-11	SPRING (L), TORSION	
33	X-4945-947-1	HOLDER (L) ASSY, CASSETTE	
⚠CNP702	1-558-945-21	CORD, POWER (POLAR. SPT-1) (Canadian)	
⚠CNP702	1-575-651-21	CORD, POWER (AEP, German)	
⚠T901	1-427-909-11	TRANSFORMER, POWER (Canadian)	
⚠T901	1-427-910-11	TRANSFORMER, POWER (AEP, German)	

(2) MECHANISM SECTION 1 (TCM-190RB52C)



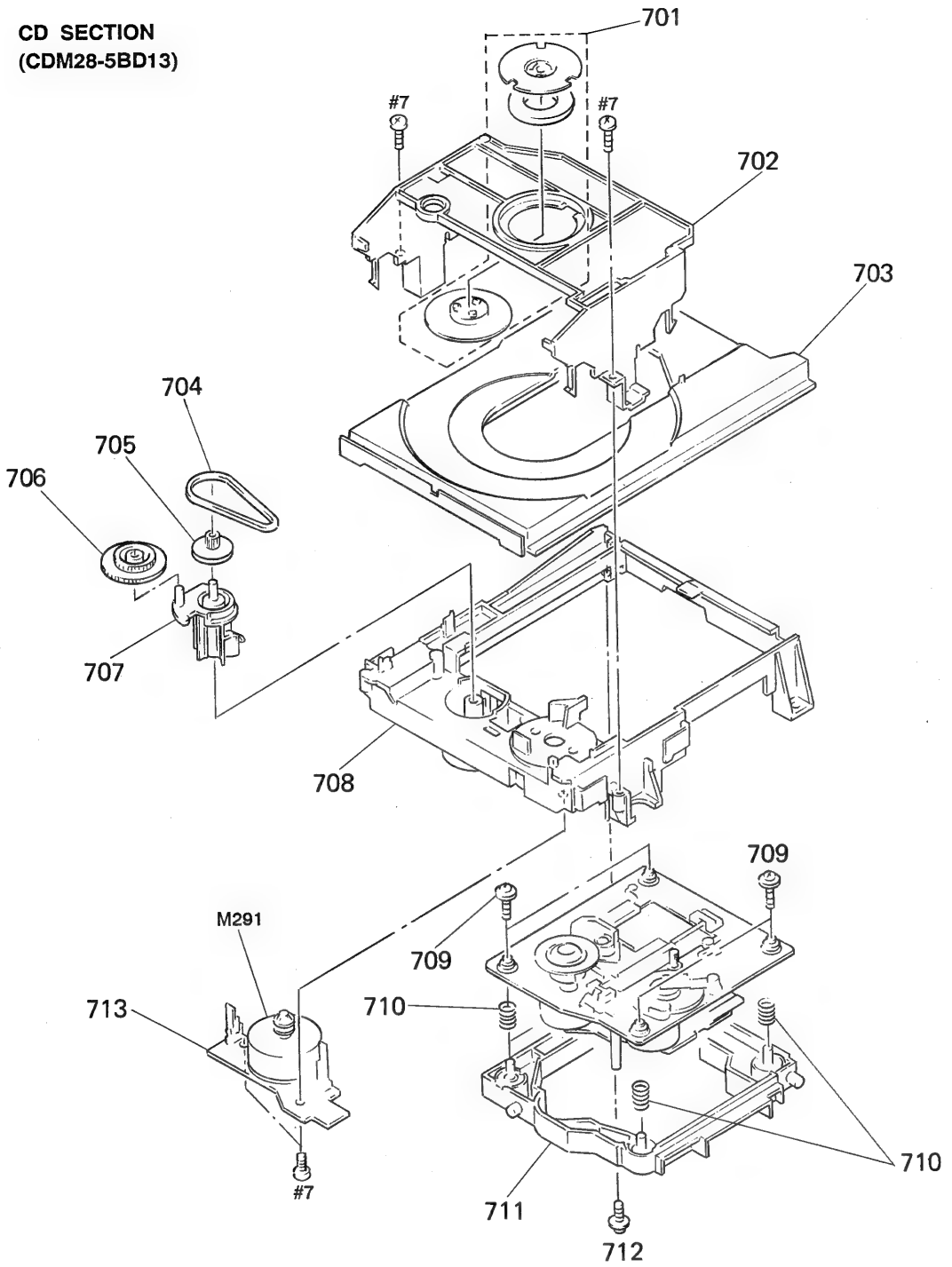
Ref. No.	Part No.	Description	Remark
101	X-3366-047-1	LEVER (PINCH F) ASSY	
102	3-356-713-01	WASHER	
103	3-907-362-01	SPRING, TORSION	
104	X-3366-970-1	TABLE ASSY, REEL	
105	3-362-308-01	CAP (REEL)	
106	3-356-714-01	WASHER	
107	X-3366-048-1	LEVER (PINCH R) ASSY	
108	X-3366-971-1	TABLE ASSY (B), REEL	
109	3-359-424-01	GEAR (REV GEAR)	
110	3-359-430-01	SPRING(CASSETTE RETAINER), LEAF	
* 112	1-638-020-11	LEAF SW BOARD	
113	3-359-466-01	BELT (FR), SQUARE	
114	X-3367-630-1	FLYWHEEL (REV) ASSY	
115	3-359-417-01	BELT (FLAT), CAPSTAN	
116	X-3367-629-1	FLYWHEEL (FWD) ASSY	
117	3-575-321-00	RETAINER, THRUST, CAPSTAN	
118	3-359-436-11	BASE (THRUST RETAINER), FITTING	
119	3-359-414-01	SCREW (+PTPWH 2X23)	
121	1-638-983-11	MOTOR FLEXIBLE	
* 122	A-2007-133-A	AUDIO BOARD, COMPLETE	
HRPE101	A-2003-930-A	DECK ASSY, HEAD (PLAYBACK/RECORD/ERASE)	
M1	X-3365-377-2	MOTOR ASSY (CAPSTAN)	
M2	X-3363-501-2	MOTOR ASSY (REEL)	

(3) MECHANISM SECTION 2 (TCM-190RB52C)



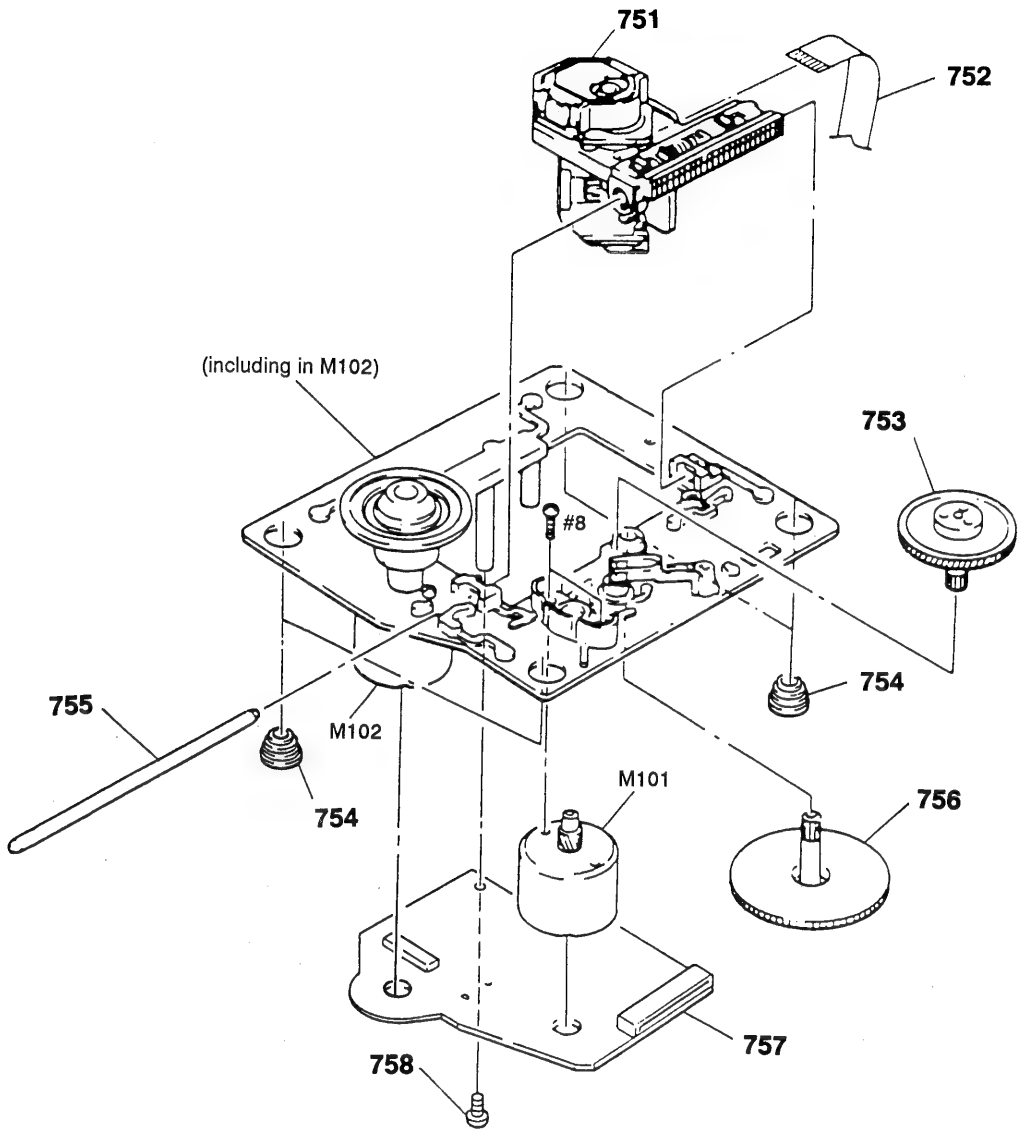
Ref. No.	Part No.	Description	Remark
151	X-3363-790-1	CHASSIS ASSY, MECHANICAL	
152	3-359-469-01	SPACER	
153	3-359-425-01	SLIDER (REVERSE SLIDER)	
154	3-359-426-01	LEVER (REVERSE LEVER)	
155	3-359-415-11	SLIDER (TRIGGER SLIDER)	
156	3-359-448-01	GEAR (TRIGGER)	
157	3-359-427-01	SLIDER (LEVERSE SLIDER)	
158	3-359-454-01	SPRING, TORSION	
159	3-359-429-11	SLIDER (BRAKE PLATE)	
160	3-359-420-01	GEAR (CAM GEAR)	
161	3-359-456-01	SPRING(TRIGGER SPRING), TORSION	
162	X-3366-569-1	ARM ASSY, FR	
163	3-924-185-11	SPRING (FR ARM), TORSION	
164	3-359-419-11	GEAR (FR GEAR)	
165	3-359-421-01	CLUTCH (REEL DISK)	
166	3-359-418-01	PULLEY (FR PULLEY)	

(4) CD SECTION (CDM28-5BD13)



Ref. No.	Part No.	Description	Remark
701	1-452-719-11	MAGNET ASSY	
702	4-960-835-01	HOLDER (M)	
703	4-960-836-01	TABLE, DISC	
704	4-927-649-01	BELT	
705	4-960-841-01	PULLEY (S)	
706	4-960-842-01	GEAR (P)	
* 707	4-960-839-01	CAM	
708	4-960-838-03	BASE (MD)	
709	4-933-134-01	SCREW (+PTPWH M2.6X6)	
710	4-959-996-01	SPRING (932), COMPRESSION	
711	4-960-834-01	HOLDER (BU)	
712	4-917-583-21	BRACKET, YOKE	
* 713	1-650-836-11	LOADING BOARD	
M291	A-4604-363-A	MOTOR (L) ASSY (LOADING)	

(5) BASE UNIT SECTION (BU-5BD13)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
⚠751	8-848-144-11	DEVICE, OPTICAL KSS-240A	
752	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
753	4-917-567-01	GEAR (M)	
754	4-951-940-01	INSULATOR (BU)	
755	4-917-565-01	SHAFT, SLED	
756	4-917-564-01	GEAR (P), FLATNESS	
757	A-4649-890-A	BD BOARD, COMPLETE	
758	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-4	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	

AUDIO

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA ..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description			Remark
*	A-2007-133-A	AUDIO BOARD, COMPLETE **********			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C13	1-136-153-00	FILM	0.01uF	5%	50V
C14	1-126-177-11	ELECT	100uF	20%	10V
C15	1-124-234-00	ELECT	22uF	20%	16V
C16	1-136-434-11	FILM	120PF	5%	630V
C17	1-164-080-11	CERAMIC	390PF	10%	50V
C18	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C23	1-136-153-00	FILM	0.01uF	5%	50V
C24	1-126-177-11	ELECT	100uF	20%	10V
C25	1-124-234-00	ELECT	22uF	20%	16V
C26	1-136-434-11	FILM	120PF	5%	630V
C27	1-164-080-11	CERAMIC	390PF	10%	50V
C28	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C52	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C53	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C54	1-136-601-11	FILM	0.01uF	5%	630V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C58	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C72	1-109-889-11	ELECT	1uF	20%	50V
		< JACK >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD			
CNJ72	1-764-902-11	CONNECTOR, FFC/FPC 4P			
		< CONNECTOR >			
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
IC31	8-759-249-21	IC	uPC1330AGR		
IC32	8-759-106-02	IC	uPC4570G2		
		< JUMPER RESISTOR >			
JW1	1-216-295-00	METAL CHIP	0	5%	1/10W
JW2	1-216-295-00	METAL CHIP	0	5%	1/10W
JW11	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW12	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW13	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW14	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW15	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW16	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW17	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW18	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW19	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW20	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW21	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW22	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW23	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW24	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW25	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW26	1-216-296-91	CONDUCTOR, CHIP			(3216)
JW27	1-216-296-91	CONDUCTOR, CHIP			(3216)
		< COIL >			
L11	1-410-780-11	INDUCTOR	27mH		
L21	1-410-780-11	INDUCTOR	27mH		
		< TRANSISTOR >			
Q51	8-729-111-29	TRANSISTOR	2SD1616A-K		
Q52	8-729-111-29	TRANSISTOR	2SD1616A-K		
Q53	8-729-111-29	TRANSISTOR	2SD1616A-K		
Q71	8-729-216-22	TRANSISTOR	2SA1162-G		
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R12	1-216-033-00	METAL CHIP	220	5%	1/10W
R13	1-216-081-00	METAL CHIP	22K	5%	1/10W
R14	1-216-075-00	METAL CHIP	12K	5%	1/10W
R15	1-216-107-00	METAL CHIP	270K	5%	1/10W
R16	1-249-430-11	CARBON	12K	5%	1/4W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-033-00	METAL CHIP	220	5%	1/10W
R23	1-216-081-00	METAL CHIP	22K	5%	1/10W
R24	1-216-075-00	METAL CHIP	12K	5%	1/10W
R25	1-216-107-00	METAL CHIP	270K	5%	1/10W
R26	1-249-430-11	CARBON	12K	5%	1/4W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R33	1-216-073-00	METAL CHIP	10K	5%	1/10W
⚠R41	1-249-393-11	CARBON	10	5%	1/4W F
⚠R42	1-249-393-11	CARBON	10	5%	1/4W F
R51	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R52	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R74	1-216-089-91	METAL GLAZE	47K	5%	1/10W

< VARIABLE RESISTOR >

RV11	1-241-761-11	RES, ADJ, CARBON 1K (PB LEVEL L)
RV12	1-238-551-11	RES, ADJ, CARBON 220K (PB LEVEL L)
RV21	1-241-761-11	RES, ADJ, CARBON 1K (PB LEVEL R)
RV22	1-238-551-11	RES, ADJ, CARBON 220K (PB LEVEL R)
RV71	1-241-630-11	RES, ADJ, CARBON 10K (NORMAL SPEED)
RV72	1-241-630-11	RES, ADJ, CARBON 10K (HIGH SPEED)

< TRANSFORMER >

T51	1-423-980-11	TRANSFORMER, BIAS OSCILLATION

****

A-4649-890-A BD BOARD, COMPLETE

****

< CAPACITOR >

C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C108	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C109	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C123	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C131	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C132	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C133	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C161	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C177	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C178	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C179	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C181	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C182	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C183	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V
C184	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V
C185	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V
C186	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C187	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C188	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C191	1-163-091-00	CERAMIC CHIP	8PF		50V
C192	1-163-091-00	CERAMIC CHIP	8PF		50V
C193	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C194	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C195	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C196	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C197	1-163-038-00	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

CN101	1-691-199-21	CONNECTOR, FPC 26P
CN102	1-565-771-11	CONNECTOR, FPC (1.0MM) (ZIF) 12P

< IC >

IC101	8-752-361-94	IC CXD2515Q
IC102	8-759-176-09	IC BA6392FP
IC103	8-752-367-61	IC CXD2565AM

< COIL >

L101	1-414-234-11	INDUCTOR, FERRITE BEAD			
L102	1-414-234-11	INDUCTOR, FERRITE BEAD			
L103	1-414-234-11	INDUCTOR, FERRITE BEAD			
L104	1-216-001-00	METAL CHIP	10	5%	1/10W
L105	1-216-295-00	METAL CHIP	0	5%	1/10W

Note:
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Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le neméro spécifié.

BD **LEAF SW** **LOADING** **MAIN** **HP** **POWER**

Ref. No.	Part No.	Description			Remark
L106	1-414-234-11	INDUCTOR, FERRITE BEAD			
L107	1-216-295-00	METAL CHIP	0	5%	1/10W
L108	1-216-295-00	METAL CHIP	0	5%	1/10W
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R110	1-216-025-00	METAL CHIP	100	5%	1/10W
R112	1-216-049-00	METAL CHIP	1K	5%	1/10W
R122	1-216-295-00	METAL CHIP	0	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-00	METAL CHIP	100K	5%	1/10W
R125	1-216-049-00	METAL CHIP	1K	5%	1/10W
R126	1-216-049-00	METAL CHIP	1K	5%	1/10W
R127	1-216-049-00	METAL CHIP	1K	5%	1/10W
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R158	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R159	1-216-101-00	METAL CHIP	150K	5%	1/10W
R181	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R182	1-216-080-00	METAL CHIP	20K	5%	1/10W
R183	1-216-080-00	METAL CHIP	20K	5%	1/10W
R184	1-216-080-00	METAL CHIP	20K	5%	1/10W
R185	1-216-080-00	METAL CHIP	20K	5%	1/10W
R187	1-216-035-00	METAL CHIP	270	5%	1/10W
R188	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R189	1-414-234-11	INDUCTOR, FERRITE BEAD			
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
		< VIBRATOR >			
X101	1-579-904-11	VIBRATOR, CRYSTAL (33.8MHz)			
**********					
*	1-638-020-11	LEAF SW BOARD			
		**********			
		< CONNECTOR >			
* CNP81	1-568-850-11	SOCKET, CONNECTOR 7P			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC81	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(H1)			
		< RESISTOR >			
R81	1-249-414-11	CARBON	560	5%	1/4W
R82	1-247-818-11	CARBON	300	5%	1/4W
R83	1-247-834-11	CARBON	1.3K	5%	1/4W
R84	1-249-417-11	CARBON	1K	5%	1/4W
R85	1-249-408-11	CARBON	180	5%	1/4W
		< SWITCH >			
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP)			
S82	1-571-281-21	SWITCH, LEAF (CrO2)			
S83	1-571-281-21	SWITCH, LEAF (METAL)			
S84	1-571-281-21	SWITCH, LEAF (REC A)			
S85	1-571-281-21	SWITCH, LEAF (REC B)			
S86	1-571-281-21	SWITCH, LEAF (HALF)			
**********					
*	1-650-836-11	LOADING BOARD			
		**********			
		< CONNECTOR >			
* CN291	1-568-943-11	PIN, CONNECTOR 5P			
		< SWITCH >			
S291	1-572-086-11	SWITCH, LEAF (LOAD OUT)			
S292	1-572-086-11	SWITCH, LEAF (LOAD IN)			
**********					
*	A-2007-413-A	MAIN BOARD, COMPLETE (Canadian)			
*	A-2007-415-A	MAIN BOARD, COMPLETE (AEP, German)			
		**********			
		HP BOARD			
		********			
		POWER BOARD			
		**********			
	4-902-345-01	HEAT SINK			
	7-685-871-01	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C101	1-136-157-00	FILM	0.022uF	5%	50V
C102	1-137-457-11	FILM	0.0027uF	5%	50V
C104	1-124-907-11	ELECT	10uF	20%	50V
C105	1-124-907-11	ELECT	10uF	20%	50V
C106	1-124-907-11	ELECT	10uF	20%	50V
C107	1-136-165-00	FILM	0.1uF	5%	50V

MAIN **HP** **POWER**

Ref. No.	Part No.	Description			Remark
C108	1-136-163-00	FILM	0.068uF	5%	50V
C111	1-126-962-11	ELECT	3.3uF	20%	50V
C112	1-124-902-00	ELECT	0.47uF	20%	50V
C113	1-126-963-11	ELECT	4.7uF	20%	50V
C115	1-124-925-11	ELECT	2.2uF	20%	100V
C116	1-161-494-00	CERAMIC	0.022uF		25V
C131	1-124-902-00	ELECT	0.47uF	20%	50V
C134	1-162-291-31	CERAMIC	560PF	10%	50V
C161	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C171	1-162-280-31	CERAMIC	82PF	10%	50V
C172	1-162-280-31	CERAMIC	82PF	10%	50V
C173	1-130-480-00	MYLAR	0.0056uF	5%	50V
C174	1-130-471-00	MYLAR	0.001uF	5%	50V
C175	1-124-477-11	ELECT	47uF	20%	25V
C201	1-136-157-00	FILM	0.022uF	5%	50V
C202	1-137-457-11	FILM	0.0027uF	5%	50V
C204	1-124-907-11	ELECT	10uF	20%	50V
C205	1-124-907-11	ELECT	10uF	20%	50V
C206	1-124-907-11	ELECT	10uF	20%	50V
C207	1-136-165-00	FILM	0.1uF	5%	50V
C208	1-136-163-00	FILM	0.068uF	5%	50V
C211	1-126-962-11	ELECT	3.3uF	20%	50V
C212	1-124-902-00	ELECT	0.47uF	20%	50V
C213	1-126-963-11	ELECT	4.7uF	20%	50V
C215	1-124-925-11	ELECT	2.2uF	20%	100V
C216	1-161-494-00	CERAMIC	0.022uF		25V
C231	1-124-902-00	ELECT	0.47uF	20%	50V
C234	1-162-291-31	CERAMIC	560PF	10%	50V
C261	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C271	1-162-280-31	CERAMIC	82PF	10%	50V
C272	1-162-280-31	CERAMIC	82PF	10%	50V
C273	1-130-480-00	MYLAR	0.0056uF	5%	50V
C274	1-130-471-00	MYLAR	0.001uF	5%	50V
C275	1-124-477-11	ELECT	47uF	20%	25V
C501	1-124-907-11	ELECT	10uF	20%	50V
C502	1-104-666-11	ELECT	220uF	20%	10V
C503	1-124-477-11	ELECT	47uF	20%	25V
C504	1-164-159-11	CERAMIC	0.1uF		50V
C511	1-162-211-31	CERAMIC	33PF	5%	50V
C512	1-162-217-31	CERAMIC	56PF	5%	50V
C513	1-124-925-11	ELECT	2.2uF	20%	100V
C514	1-161-494-00	CERAMIC	0.022uF		25V
C515	1-124-925-11	ELECT	2.2uF	20%	100V
C517	1-126-952-11	ELECT	1000uF	20%	16V
C524	1-124-903-11	ELECT	1uF	20%	50V
C531	1-126-916-11	ELECT	1000uF	20%	6.3V
C541	1-136-175-00	FILM	0.68uF	5%	50V
C542	1-136-168-00	FILM	0.18uF	5%	50V
C543	1-136-153-00	FILM	0.01uF	5%	50V

Ref. No.	Part No.	Description			Remark
C544	1-126-962-11	ELECT	3.3uF	20%	50V
C545	1-124-907-11	ELECT	10uF	20%	50V
C701	1-126-943-11	ELECT	2200uF	20%	25V
C702	1-161-494-00	CERAMIC	0.022uF		25V
C703	1-104-666-11	ELECT	220uF	20%	10V
C704	1-164-159-11	CERAMIC	0.1uF		50V
C705	1-124-907-11	ELECT	10uF	20%	50V
C706	1-126-941-11	ELECT	470uF	20%	6.3V
C707	1-126-768-11	ELECT	2200uF	20%	16V
C708	1-126-768-11	ELECT	2200uF	20%	16V
C709	1-124-477-11	ELECT	47uF	20%	25V
C710	1-124-473-11	ELECT	1000uF	20%	10V
C711	1-124-473-11	ELECT	1000uF	20%	10V
C712	1-124-122-11	ELECT	100uF	20%	50V
C713	1-124-477-11	ELECT	47uF	20%	25V
C714	1-161-494-00	CERAMIC	0.022uF		25V
C715	1-124-903-11	ELECT	1uF	20%	50V
C719	1-126-963-11	ELECT	4.7uF	20%	50V
C720	1-126-963-11	ELECT	4.7uF	20%	50V
C721	1-126-941-11	ELECT	470uF	20%	6.3V
C801	1-124-443-00	ELECT	100uF	20%	10V
C802	1-161-494-00	CERAMIC	0.022uF		25V
C803	1-126-963-11	ELECT	4.7uF	20%	50V
C804	1-124-907-11	ELECT	10uF	20%	50V
C805	1-162-288-31	CERAMIC	330PF	10%	50V
C806	1-164-159-11	CERAMIC	0.1uF		50V
C807	1-162-306-11	CERAMIC	0.01uF	30%	16V
C808	1-161-494-00	CERAMIC	0.022uF		25V
C809	1-164-159-11	CERAMIC	0.1uF		50V
C810	1-164-159-11	CERAMIC	0.1uF		50V
C811	1-161-494-00	CERAMIC	0.022uF		25V
C812	1-161-494-00	CERAMIC	0.022uF		25V
C813	1-161-494-00	CERAMIC	0.022uF		25V
C814	1-161-494-00	CERAMIC	0.022uF		25V
C815	1-161-494-00	CERAMIC	0.022uF		25V

< CONNECTOR >

* CN801 1-568-826-11 SOCKET, CONNECTOR 7P
* CN804 1-568-830-11 SOCKET, CONNECTOR 11P
* CN805 1-568-845-11 SOCKET, CONNECTOR 31P

< CONNECTOR >

* CNP501 1-568-954-11 PIN, CONNECTOR 5P
* CNP502 1-568-954-11 PIN, CONNECTOR 5P
* CNP503 1-691-916-11 CONNECTOR, BOARD TO BOARD
* CNP504 1-691-916-11 CONNECTOR, BOARD TO BOARD
CNP701 1-766-272-11 PIN, CONNECTOR (PC BOARD) 10P

* CNP702 1-580-230-31 PIN, CONNECTOR (PC BOARD) 2P
CNP703 1-766-275-11 PIN, CONNECTOR (PC BOARD) 2P

MAIN **HP** **POWER**

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D131	8-719-987-63	DIODE 1N4148M	
D132	8-719-987-63	DIODE 1N4148M	
D141	8-719-987-63	DIODE 1N4148M	
D142	8-719-987-63	DIODE 1N4148M	
D143	8-719-987-63	DIODE 1N4148M	
D231	8-719-987-63	DIODE 1N4148M	
D232	8-719-987-63	DIODE 1N4148M	
D241	8-719-987-63	DIODE 1N4148M	
D242	8-719-987-63	DIODE 1N4148M	
D243	8-719-987-63	DIODE 1N4148M	
D501	8-719-987-63	DIODE 1N4148M	
D502	8-719-987-63	DIODE 1N4148M	
D511	8-719-987-63	DIODE 1N4148M	
D541	8-719-987-63	DIODE 1N4148M	
D701	8-719-024-99	DIODE 11ES2-NTA2B	
D702	8-719-024-99	DIODE 11ES2-NTA2B	
D703	8-719-024-99	DIODE 11ES2-NTA2B	
D704	8-719-024-99	DIODE 11ES2-NTA2B	
D705	8-719-024-99	DIODE 11ES2-NTA2B	
D706	8-719-024-99	DIODE 11ES2-NTA2B	
D707	8-719-024-99	DIODE 11ES2-NTA2B	
D708	8-719-024-99	DIODE 11ES2-NTA2B	
D709	8-719-987-63	DIODE 1N4148M	
D710	8-719-987-63	DIODE 1N4148M	
D711	8-719-987-63	DIODE 1N4148M	
D712	8-719-000-60	DIODE UZL-6M2	
D713	8-719-933-33	DIODE HZS6A1L	
D714	8-719-933-33	DIODE HZS6A1L	
D715	8-719-024-99	DIODE 11ES2-NTA2B	
D716	8-719-987-63	DIODE 1N4148M	
D717	8-719-987-63	DIODE 1N4148M	
D718	8-719-933-50	DIODE HZS7C2L	
D719	8-719-933-33	DIODE HZS6A1L	
D720	8-719-987-63	DIODE 1N4148M	
D721	8-719-933-33	DIODE HZS6A1L	
D801	8-719-010-29	DIODE UZ-4.3BSB	
D802	8-719-933-33	DIODE HZS6A1L	
		< IC >	
IC501	8-752-060-46	IC CXA1561S	
IC502	8-752-055-61	IC CXA1578P	
IC503	8-759-635-26	IC M5283P	
IC504	8-759-000-49	IC MC14066BCP	
IC505	8-759-000-49	IC MC14066BCP	
IC506	8-759-634-51	IC M5218AP	
IC507	8-759-634-51	IC M5218AP	
IC508	8-759-634-51	IC M5218AP	
IC509	8-759-000-48	IC MC14052BCP	
IC510	8-759-634-51	IC M5218AP	
IC511	8-759-634-51	IC M5218AP	
IC601	8-759-634-51	IC M5218AP	
IC602	8-759-634-51	IC M5218AP	
IC701	8-759-634-51	IC M5218AP	
IC702	8-759-071-48	IC TA7807S	
IC703	8-759-061-65	IC LA5602	
IC801	8-759-357-17	IC uPD78044AGF-133-3B9	
IC802	8-759-165-82	IC PST600E-T	
IC803	8-759-000-48	IC MC14052BCP	
IC805	8-759-803-42	IC LA6500-FA	
IC806	8-759-822-09	IC LB1641	
		< JACK >	
J501	1-565-320-81	JACK, PIN 6P(CD LINE OUT, TC LINE IN/OUT)	
J502	1-507-796-71	JACK (PHONES)	
		< COIL >	
L801	1-410-322-11	INDUCTOR 3.3uH	
L802	1-410-322-11	INDUCTOR 3.3uH	
		< FILTER >	
LPF101	1-239-355-11	FILTER, LOW PASS	
LPF201	1-239-355-11	FILTER, LOW PASS	
		< TRANSISTOR >	
Q101	8-729-900-89	TRANSISTOR DTC144ES	
Q102	8-729-900-80	TRANSISTOR DTC114ES	
Q131	8-729-922-37	TRANSISTOR 2SD2144S	
Q132	8-729-922-37	TRANSISTOR 2SD2144S	
Q133	8-729-900-61	TRANSISTOR DTA114ES	
Q141	8-729-900-74	TRANSISTOR DTC143TS	
Q142	8-729-900-74	TRANSISTOR DTC143TS	
Q201	8-729-900-89	TRANSISTOR DTC144ES	
Q202	8-729-900-80	TRANSISTOR DTC114ES	
Q231	8-729-922-37	TRANSISTOR 2SD2144S	
Q232	8-729-922-37	TRANSISTOR 2SD2144S	
Q233	8-729-900-61	TRANSISTOR DTA114ES	
Q241	8-729-900-74	TRANSISTOR DTC143TS	
Q242	8-729-900-74	TRANSISTOR DTC143TS	
Q501	8-729-900-89	TRANSISTOR DTC144ES	
Q502	8-729-900-80	TRANSISTOR DTC114ES	
Q503	8-729-900-80	TRANSISTOR DTC114ES	
Q505	8-729-900-65	TRANSISTOR DTA144ES	
Q506	8-729-900-65	TRANSISTOR DTA144ES	

Ref. No.	Part No.	Description		Remark
Q507	8-729-900-80	TRANSISTOR	DTC114ES	
Q511	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q512	8-729-900-80	TRANSISTOR	DTC114ES	
Q531	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q551	8-729-900-89	TRANSISTOR	DTC144ES	
Q701	8-729-141-83	TRANSISTOR	2SB1094-LK	
Q702	8-729-119-78	TRANSISTOR	2SC403SP-51	
Q703	8-729-900-74	TRANSISTOR	DTC143TS	
Q704	8-729-900-74	TRANSISTOR	DTC143TS	
Q705	8-729-141-83	TRANSISTOR	2SB1094-LK	
Q706	8-729-209-15	TRANSISTOR	2SD2012	
Q707	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q708	8-729-140-04	TRANSISTOR	2SB1116A-L	
Q709	8-729-900-65	TRANSISTOR	DTA144ES	
Q801	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q802	8-729-801-93	TRANSISTOR	2SD1387	
Q803	8-729-900-80	TRANSISTOR	DTC114ES	

< RESISTOR >

R100	1-249-433-11	CARBON	22K	5%	1/4W
R101	1-249-421-11	CARBON	2.2K	5%	1/4W
R102	1-249-423-11	CARBON	3.3K	5%	1/4W
R103	1-249-423-11	CARBON	3.3K	5%	1/4W
R104	1-249-424-11	CARBON	3.9K	5%	1/4W
R105	1-247-887-00	CARBON	220K	5%	1/4W
R106	1-249-417-11	CARBON	1K	5%	1/4W
R107	1-249-429-11	CARBON	10K	5%	1/4W
R111	1-249-429-11	CARBON	10K	5%	1/4W
R112	1-249-423-11	CARBON	3.3K	5%	1/4W
R113	1-249-423-11	CARBON	3.3K	5%	1/4W
R115	1-249-441-11	CARBON	100K	5%	1/4W
R116	1-247-887-00	CARBON	220K	5%	1/4W
R131	1-249-417-11	CARBON	1K	5%	1/4W
R132	1-249-421-11	CARBON	2.2K	5%	1/4W
R133	1-249-437-11	CARBON	47K	5%	1/4W
R134	1-249-421-11	CARBON	2.2K	5%	1/4W
R135	1-249-417-11	CARBON	1K	5%	1/4W
R136	1-249-421-11	CARBON	2.2K	5%	1/4W
R137	1-249-433-11	CARBON	22K	5%	1/4W
R138	1-249-417-11	CARBON	1K	5%	1/4W
R139	1-247-887-00	CARBON	220K	5%	1/4W
R141	1-249-435-11	CARBON	33K	5%	1/4W
R142	1-249-441-11	CARBON	100K	5%	1/4W
R161	1-249-441-11	CARBON	100K	5%	1/4W
R162	1-247-868-11	CARBON	36K	5%	1/4W
R163	1-249-421-11	CARBON	2.2K	5%	1/4W
R164	1-247-854-11	CARBON	9.1K	5%	1/4W
R165	1-249-409-11	CARBON	220	5%	1/4W
R171	1-247-852-11	CARBON	7.5K	5%	1/4W
R172	1-247-852-11	CARBON	7.5K	5%	1/4W
R173	1-249-434-11	CARBON	27K	5%	1/4W
R174	1-249-434-11	CARBON	27K	5%	1/4W
R175	1-249-419-11	CARBON	1.5K	5%	1/4W
R176	1-249-419-11	CARBON	1.5K	5%	1/4W
R177	1-249-441-11	CARBON	100K	5%	1/4W
R200	1-249-433-11	CARBON	22K	5%	1/4W
R201	1-249-421-11	CARBON	2.2K	5%	1/4W
R202	1-249-423-11	CARBON	3.3K	5%	1/4W
R203	1-249-423-11	CARBON	3.3K	5%	1/4W
R204	1-249-424-11	CARBON	3.9K	5%	1/4W
R205	1-247-887-00	CARBON	220K	5%	1/4W
R206	1-249-417-11	CARBON	1K	5%	1/4W
R207	1-249-429-11	CARBON	10K	5%	1/4W
R211	1-249-429-11	CARBON	10K	5%	1/4W
R212	1-249-423-11	CARBON	3.3K	5%	1/4W
R213	1-249-423-11	CARBON	3.3K	5%	1/4W
R215	1-249-441-11	CARBON	100K	5%	1/4W
R216	1-247-887-00	CARBON	220K	5%	1/4W
R231	1-249-417-11	CARBON	1K	5%	1/4W
R232	1-249-421-11	CARBON	2.2K	5%	1/4W
R233	1-249-437-11	CARBON	47K	5%	1/4W
R234	1-249-421-11	CARBON	2.2K	5%	1/4W
R235	1-249-417-11	CARBON	1K	5%	1/4W
R236	1-249-421-11	CARBON	2.2K	5%	1/4W
R237	1-249-433-11	CARBON	22K	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R239	1-247-887-00	CARBON	220K	5%	1/4W
R241	1-249-435-11	CARBON	33K	5%	1/4W
R242	1-249-441-11	CARBON	100K	5%	1/4W
R261	1-249-441-11	CARBON	100K	5%	1/4W
R262	1-247-868-11	CARBON	36K	5%	1/4W
R263	1-249-421-11	CARBON	2.2K	5%	1/4W
R264	1-247-854-11	CARBON	9.1K	5%	1/4W
R265	1-249-409-11	CARBON	220	5%	1/4W
R271	1-247-852-11	CARBON	7.5K	5%	1/4W
R272	1-247-852-11	CARBON	7.5K	5%	1/4W
R273	1-249-434-11	CARBON	27K	5%	1/4W
R274	1-249-434-11	CARBON	27K	5%	1/4W
R275	1-249-419-11	CARBON	1.5K	5%	1/4W
R276	1-249-419-11	CARBON	1.5K	5%	1/4W
R277	1-249-441-11	CARBON	100K	5%	1/4W
R501	1-215-452-00	METAL	20K	1%	1/4W
R502	1-215-455-00	METAL	27K	1%	1/4W
R503	1-249-433-11	CARBON	22K	5%	1/4W
R504	1-249-429-11	CARBON	10K	5%	1/4W
R505	1-249-437-11	CARBON	47K	5%	1/4W
R506	1-249-429-11	CARBON	10K	5%	1/4W
R507	1-249-435-11	CARBON	33K	5%	1/4W

MAIN HP POWER

Ref. No.	Part No.	Description				Remark
R508	1-249-435-11	CARBON	33K	5%	1/4W	
R509	1-249-435-11	CARBON	33K	5%	1/4W	
R510	1-249-433-11	CARBON	22K	5%	1/4W	
R511	1-249-413-11	CARBON	470	5%	1/4W	
R512	1-249-429-11	CARBON	10K	5%	1/4W	
R513	1-247-883-00	CARBON	150K	5%	1/4W	
R514	1-249-427-11	CARBON	6.8K	5%	1/4W	
R515	1-249-423-11	CARBON	3.3K	5%	1/4W	
R516	1-249-428-11	CARBON	8.2K	5%	1/4W	
R517	1-249-441-11	CARBON	100K	5%	1/4W	
R518	1-249-429-11	CARBON	10K	5%	1/4W	
R519	1-249-417-11	CARBON	1K	5%	1/4W	
R520	1-249-432-11	CARBON	18K	5%	1/4W	
R521	1-249-436-11	CARBON	39K	5%	1/4W	
R522	1-249-441-11	CARBON	100K	5%	1/4W	
R524	1-249-428-11	CARBON	8.2K	5%	1/4W	
R525	1-249-421-11	CARBON	2.2K	5%	1/4W	
R527	1-249-435-11	CARBON	33K	5%	1/4W	
R528	1-247-807-31	CARBON	100	5%	1/4W	
R531	1-249-437-11	CARBON	47K	5%	1/4W	
R532	1-249-437-11	CARBON	47K	5%	1/4W	
R533	1-249-429-11	CARBON	10K	5%	1/4W	
R541	1-249-437-11	CARBON	47K	5%	1/4W	
R542	1-249-437-11	CARBON	47K	5%	1/4W	
R543	1-249-437-11	CARBON	47K	5%	1/4W	
R544	1-247-874-11	CARBON	62K	5%	1/4W	
R545	1-249-410-11	CARBON	270	5%	1/4W	
R546	1-249-421-11	CARBON	2.2K	5%	1/4W	
R551	1-249-433-11	CARBON	22K	5%	1/4W	
R552	1-249-429-11	CARBON	10K	5%	1/4W	
R553	1-249-429-11	CARBON	10K	5%	1/4W	
R701	1-249-421-11	CARBON	2.2K	5%	1/4W	
R702	1-249-425-11	CARBON	4.7K	5%	1/4W	
R703	1-249-425-11	CARBON	4.7K	5%	1/4W	
R704	1-249-419-11	CARBON	1.5K	5%	1/4W	
R705	1-249-418-11	CARBON	1.2K	5%	1/4W	
R706	1-249-427-11	CARBON	6.8K	5%	1/4W	
R707	1-249-419-11	CARBON	1.5K	5%	1/4W	
R708	1-249-429-11	CARBON	10K	5%	1/4W	
R709	1-249-419-11	CARBON	1.5K	5%	1/4W	
R710	1-249-427-11	CARBON	6.8K	5%	1/4W	
R711	1-249-427-11	CARBON	6.8K	5%	1/4W	
R712	1-249-417-11	CARBON	1K	5%	1/4W	
R713	1-249-409-11	CARBON	220	5%	1/4W	
R714	1-249-425-11	CARBON	4.7K	5%	1/4W	
R715	1-249-427-11	CARBON	6.8K	5%	1/4W	
R716	1-247-866-11	CARBON	30K	5%	1/4W	
R717	1-249-429-11	CARBON	10K	5%	1/4W	
R718	1-249-437-11	CARBON	47K	5%	1/4W	
R719	1-249-429-11	CARBON	10K	5%	1/4W	
R720	1-249-417-11	CARBON	1K	5%	1/4W	
R721	1-249-414-11	CARBON	560	5%	1/4W	
⚠R722	1-219-137-11	FUSIBLE	0.33	10%	1/4W	F
⚠R723	1-217-371-00	FUSIBLE	0.47	10%	1/4W	F
⚠R724	1-219-139-11	FUSIBLE	0.68	10%	1/4W	F
R801	1-249-441-11	CARBON	100K	5%	1/4W	
R802	1-249-417-11	CARBON	1K	5%	1/4W	
R803	1-247-807-31	CARBON	100	5%	1/4W	
R804	1-247-807-31	CARBON	100	5%	1/4W	
R805	1-247-807-31	CARBON	100	5%	1/4W	
R806	1-247-807-31	CARBON	100	5%	1/4W	
R807	1-249-422-11	CARBON	2.7K	5%	1/4W	
R808	1-249-422-11	CARBON	2.7K	5%	1/4W	
R809	1-249-422-11	CARBON	2.7K	5%	1/4W	
R810	1-249-429-11	CARBON	10K	5%	1/4W	
R811	1-247-862-11	CARBON	20K	5%	1/4W	
R812	1-249-430-11	CARBON	12K	5%	1/4W	
R813	1-249-433-11	CARBON	22K	5%	1/4W	
R814	1-249-433-11	CARBON	22K	5%	1/4W	
R815	1-249-433-11	CARBON	22K	5%	1/4W	
R816	1-247-807-31	CARBON	100	5%	1/4W	
R817	1-249-419-11	CARBON	1.5K	5%	1/4W	
R818	1-249-429-11	CARBON	10K	5%	1/4W	
R819	1-249-434-11	CARBON	27K	5%	1/4W	
R820	1-249-421-11	CARBON	2.2K	5%	1/4W	
R821	1-249-421-11	CARBON	2.2K	5%	1/4W	
R822	1-249-421-11	CARBON	2.2K	5%	1/4W	
R823	1-249-428-11	CARBON	8.2K	5%	1/4W	
R824	1-249-418-11	CARBON	1.2K	5%	1/4W	
R825	1-249-417-11	CARBON	1K	5%	1/4W	
R826	1-249-417-11	CARBON	1K	5%	1/4W	
R827	1-249-417-11	CARBON	1K	5%	1/4W	
R828	1-249-417-11	CARBON	1K	5%	1/4W	
R829	1-249-417-11	CARBON	1K	5%	1/4W	
R830	1-249-417-11	CARBON	1K	5%	1/4W	
R831	1-249-417-11	CARBON	1K	5%	1/4W	
R833	1-249-418-11	CARBON	1.2K	5%	1/4W	
R834	1-249-428-11	CARBON	8.2K	5%	1/4W	
R835	1-249-441-11	CARBON	100K	5%	1/4W	
R836	1-249-417-11	CARBON	1K	5%	1/4W	
R837	1-249-429-11	CARBON	10K	5%	1/4W	

< VARIABLE RESISTOR >

RV111	1-241-630-11	RES, ADJ, CARBON 10K
RV211	1-241-630-11	RES, ADJ, CARBON 10K
RV501	1-223-864-11	RES, VAR, CARBON 1K/1K (LEVEL)

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Note: Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

Ref. No.	Part No.	Description			Remark
		< TEST PIN >			
* TP801	1-560-060-00	PIN, CONNECTOR 2P			
		< VIBRATOR >			
X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)			
**********					
*	A-2007-414-A	PANEL BOARD, COMPLETE			
		**********			
	3-923-303-01	HOLDER (FL TUBE)			
		< CAPACITOR >			
C901	1-161-494-00	CERAMIC	0.022uF		25V
C902	1-161-494-00	CERAMIC	0.022uF		25V
C903	1-161-494-00	CERAMIC	0.022uF		25V
C904	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
* CN901	1-568-873-11	SOCKET, CONNECTOR 31P			
* CN902	1-568-854-11	SOCKET, CONNECTOR 11P			
		< DIODE >			
D901	8-719-313-48	DIODE SEL6210S-TH12 (AUTO)			
		< FILTER >			
FL901	1-517-421-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC901	8-741-810-59	IC SBX1810-59			
		< RESISTOR >			
R901	1-249-429-11	CARBON	10K	5%	1/4W
R902	1-249-429-11	CARBON	10K	5%	1/4W
R903	1-249-429-11	CARBON	10K	5%	1/4W
R904	1-249-429-11	CARBON	10K	5%	1/4W
R905	1-249-418-11	CARBON	1.2K	5%	1/4W
R906	1-249-420-11	CARBON	1.8K	5%	1/4W
R907	1-249-422-11	CARBON	2.7K	5%	1/4W
R908	1-249-424-11	CARBON	3.9K	5%	1/4W
R909	1-249-427-11	CARBON	6.8K	5%	1/4W
R910	1-249-431-11	CARBON	15K	5%	1/4W
R911	1-249-437-11	CARBON	47K	5%	1/4W
R912	1-249-418-11	CARBON	1.2K	5%	1/4W
R913	1-249-420-11	CARBON	1.8K	5%	1/4W
R914	1-249-422-11	CARBON	2.7K	5%	1/4W
R915	1-249-424-11	CARBON	3.9K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R916	1-249-427-11	CARBON	6.8K	5%	1/4W
R917	1-249-431-11	CARBON	15K	5%	1/4W
R918	1-249-437-11	CARBON	47K	5%	1/4W
R919	1-249-418-11	CARBON	1.2K	5%	1/4W
R920	1-249-420-11	CARBON	1.8K	5%	1/4W
R921	1-249-422-11	CARBON	2.7K	5%	1/4W
R922	1-249-424-11	CARBON	3.9K	5%	1/4W
R923	1-249-427-11	CARBON	6.8K	5%	1/4W
R924	1-249-431-11	CARBON	15K	5%	1/4W
R926	1-249-418-11	CARBON	1.2K	5%	1/4W
R927	1-249-420-11	CARBON	1.8K	5%	1/4W
R928	1-249-422-11	CARBON	2.7K	5%	1/4W
R929	1-249-424-11	CARBON	3.9K	5%	1/4W
R930	1-249-427-11	CARBON	6.8K	5%	1/4W
R933	1-249-413-11	CARBON	470	5%	1/4W
R934	1-249-417-11	CARBON	1K	5%	1/4W
R935	1-247-807-31	CARBON	100	5%	1/4W
		< VARIABLE RESISTOR >			
RV901	1-241-797-11	RES, VAR, CARBON 20K (REC LEVEL)			
		< SWITCH >			
S701	1-692-409-11	SWITCH, PUSH (1 KEY) (POWER)			
S901	1-554-303-21	SWITCH, TACTILE (■)			
S902	1-554-303-21	SWITCH, TACTILE (◀◀(AMS))			
S903	1-554-303-21	SWITCH, TACTILE ((AMS)▶▶)			
S904	1-554-303-21	SWITCH, TACTILE (●REC)			
S905	1-554-303-21	SWITCH, TACTILE (ARL)			
S906	1-554-303-21	SWITCH, TACTILE (FADER)			
S907	1-554-303-21	SWITCH, TACTILE (▷)			
S908	1-554-303-21	SWITCH, TACTILE (◁)			
S909	1-554-303-21	SWITCH, TACTILE (❚❚)			
S910	1-554-303-21	SWITCH, TACTILE (○REC MUTE)			
S911	1-554-303-21	SWITCH, TACTILE (RESET)			
S912	1-554-303-21	SWITCH, TACTILE (DISPLAY)			
S913	1-554-303-21	SWITCH, TACTILE (■)			
S914	1-554-303-21	SWITCH, TACTILE (❚❚)			
S915	1-554-303-21	SWITCH, TACTILE (⏮ ◀◀)			
S916	1-554-303-21	SWITCH, TACTILE (▶▶ ⏭)			
S917	1-554-303-21	SWITCH, TACTILE (EDIT TIME FADE)			
S918	1-554-303-21	SWITCH, TACTILE (CHECK)			
S919	1-554-303-21	SWITCH, TACTILE (CLEAR)			
S920	1-554-303-21	SWITCH, TACTILE			
S921	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)			
S922	1-554-303-21	SWITCH, TACTILE (▷)			
S923	1-554-303-21	SWITCH, TACTILE (PLAY MODE)			
S924	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)			
S925	1-554-303-21	SWITCH, TACTILE (TIME)			

PANEL

Ref. No.	Part No.	Description	Remark
S926	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S927	1-571-296-11	SWITCH, SLIDE (DOLBY NR)	
S928	1-571-296-11	SWITCH, SLIDE (DIR MODE)	
**********			
		MISCELLANEOUS	
		**********	
7	1-775-368-11	WIRE (FLAT TYPE) (31 CORE)	
11	1-775-369-11	WIRE (FLAT TYPE) (11 CORE)	
23	1-775-370-11	WIRE (FLAT TYPE) (7 CORE)	
24	1-775-371-11	WIRE (FLAT TYPE) (26 CORE)	
121	1-638-983-11	MOTOR FLEXIBLE	
701	1-452-719-11	MAGNET ASSY	
⚠751	8-848-144-11	DEVICE, OPTICAL KSS-240A	
752	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
⚠CNP702	1-558-945-21	CORD, POWER (POLAR. SPT-1) (Canadian)	
⚠CNP702	1-575-651-21	CORD, POWER (AEP, German)	
HRPE101A	2003-930-A	DECK ASSY, HEAD (PLAYBACK/RECORD/ERASE)	
M1	X-3365-377-2	MOTOR ASSY (CAPSTAN)	
M2	X-3363-501-2	MOTOR ASSY (REEL)	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-4	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
M291	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
⚠T901	1-427-909-11	TRANSFORMER, POWER (Canadian)	
⚠T901	1-427-910-11	TRANSFORMER, POWER (AEP, German)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-551-734-11	CORD, CONNECTION	
	3-798-627-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (Canadian)	
	3-798-627-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTGUESE) (AEP)	
	3-798-627-31	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	
	3-798-627-41	MANUAL, INSTRUCTION (GERMAN) (German)	
*	3-907-887-01	CUSHION	
*	3-923-808-41	INDIVIDUAL CARTON (Canadian)	
*	3-923-808-51	INDIVIDUAL CARTON (AEP, German)	
	1-473-359-11	REMOTE COMMANDER (RM-J803)	
	2-181-754-01	COVER, BATTERY (FOR RM-J803)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-871-01	SCREW +BVTT 3X6 (S)	
#2	7-685-133-19	SCREW (DIA. 2.6) (IT3B)	
#4	7-621-773-95	SCREW +BVTT 2.6X6 (S)	
#5	7-621-775-00	SCREW +B 2.6X3	
#6	7-627-556-08	SCREW +P 2.6X2.8	
#7	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#8	7-621-255-15	SCREW +P 2X3	

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